



Nairobi Municipality
Kenya.

NINTH
ANNUAL REPORT
OF THE
Medical Officer of Health.

1937



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CONTENTS



| | PAGE. |
|---|-------|
| 1. General | 3 |
| 2. Geographical | 7 |
| 3. Meteorological | 7 |
| 4. Rainfall | 8 |
| 5. Population | 9 |
| 6. Marriages | 9 |
| 7. Births | 9 |
| 8. Deaths | 11 |
| 9. Infant mortality | 21 |
| 10. Notifiable infectious diseases | 25 |
| 11. Infectious and communicable diseases | 28 |
| 12. Admissions to hospital | 31 |
| 13. Plague | 34 |
| 14. Malaria | 35 |
| 15. Anti-malarial works | 39 |
| 16. Laboratory | 41 |
| 17. Anti-malarial measures | 43 |
| 18. Rodent destruction | 45 |
| 19. Native burials | 46 |
| 20. Crematorium | 46 |
| 21. Water supply | 46 |
| 22. Housing | 46 |
| 23. New buildings | 47 |
| 24. Sanitation | 47 |
| 25. Sanitary inspections | 48 |
| 26. Food control | 50 |
| 27. Milk dépôt | 51 |
| 28. Abattoir | 52 |
| 29. Child welfare clinics, etc. | 55 |
| 30. Staff | 60 |
| 31. Expenditure | 62 |

Town Hall,
Nairobi,
March 15th, 1938

His Worship the Mayor and Councillors of the
Municipal Council of Nairobi.

Gentlemen,

I have the honour to present to you herewith my annual report on the sanitary circumstances, sanitary administration, vital statistics, and other matters of a health nature, of the Municipality of Nairobi for the year 1937, as required by "The Local Government (Municipalities) Ordinance, 1928," "The Medical Officers of Health Rules, 1929, Sec. 2(12)d.

I am, Gentlemen,

Your obedient servant,

H. W. TILLING,

M.R.C.S., L.R.C.P., D.P.H.,

Medical Officer of Health.

1. GENERAL.

The Local Government (Municipalities) Ordinance came into force as from 1929, thus this is the ninth year that the Municipal Council of Nairobi has been the public health authority for the Municipality of Nairobi.

The office of the Public Health Department is situated in the Town Hall, recently built in the City Square.

No new legislation of a health nature has been passed during the year.

Meteorological tables are included in this report showing the barometric pressure, relative humidity and temperatures within the Municipality during the year.

After four consecutive years of rainfall below the average, Nairobi experienced a good year during 1937, the rainfall totalling over 50 inches. Rainfalls of over 50 inches occurred previously in the years 1930, 1923, 1920, 1917, and 1912.

Five months namely April, May, June, October, and November recorded falls above the average, whilst the rainfall during the months of April, June, and November constituted a record for those months. The days of rain totalled 126, compared with an average of 111 and the average fall of rain per rainy day amounted to 0.44 inches, compared with the average over 31 years of 0.32 inches.

The longest period without rain was 27 days during December-January and the next longest was 26 days during February-March.

The estimated population of the Municipality for 1937 was 61,300 being an increase of 11,700 over the estimated figure for the previous year, the increase was shared by all communities but mainly by the Native population which is considered to have increased to the extent of 10,000.

During the year 1,245 births were notified, of these 963 were of residents and 282 of non-residents, compared with a total of 917 notified last year among 682 residents and 235 non-residents.

The crude birth rate for all races amounted to 15.7, compared with 13.7 for 1936, whilst the true birth rate was 14.6. This rather large difference may be partially due to a more accurate notification of births.

The birth rate for England and Wales during 1936 was 14.8 and the birth rate for British India is about 34. No suitable comparative figures can be obtained in regard to the Native population.

The rate per thousand population of the natural increase for the European community was 3.6 and for the Asian community 8.5. The rate in connection with the natural increase for Natives and others was an adverse one of -7.2.

The percentage of stillbirth to total births showed a marked improvement over the previous year, being 2.8 per cent for residents, compared with 6.4 per cent and 6.7 per cent for non-residents, compared with 11.9 per cent. The marked difference between the figures for residents and non-residents is worthy of note.

The crude death rate for all races for the year was 23.01 per thousand persons. This rate is slightly lower than last year when the figure was 23.29, but the recorded death rate was higher than in 1936, being 16.96 per thousand persons, compared with 15.92.

The 42 European deaths equalled a rate of 6.99 per thousand persons of that race, whilst the 285 Asian deaths equalled a rate of 16.47 and the 713 Native deaths were equivalent to a rate of 18.75.

In the report of last year attention was directed to the high infant mortality rate among non-Europeans, this year there is some improvement, the rate being 324, compared with 479 for 1936.

The infant mortality rate, that is the proportion of infant deaths per thousand live births for the European community during 1937 was 109, for the Asian community 310 and for the Native community 338, the rate for all races amounting to 309.

It is possible that this considerable decrease in the infant mortality rate may be accounted for by more accurate notifications of births rather than any marked improvement in conditions.

Excluding malaria, the number of notifications of infectious diseases totalled 179, compared with 176 during 1936. Increases were recorded in connection with puerperal sepsis, diphtheria, plague and relapsing fever, while there were fewer cases of tuberculosis, tropical typhus and erysipelas notified.

The non-notifiable conditions chicken-pox, measles, whooping cough and mumps have been prevalent during the year although judging by admissions to hospital, none of these conditions were as frequent as in the previous year.

The admissions to hospital on account of infectious and communicable diseases during 1937 were considerably less than during 1936, being 266, compared with 524, whilst the total patient days decreased from 9,765 to 7,372.

The decrease in patient days was concerned mainly with leprosy, chicken-pox and measles, whilst increases were registered for anthrax, plague and relapsing fever.

Twenty-five cases of human plague occurred within the Municipality during the year, with a case mortality of 88 per cent. The outbreak was spread over seven months and was characterized by the sporadic nature of the infection.

Plague has been prevalent in the reserves near Nairobi and the frequent service of native buses tends to spread the disease in the town, as it is common for a native feeling ill to board a bus and come to Nairobi for treatment.

Malaria was notified in 1,235 instances during the year. Of these 1,025 were resident cases and 210 non-resident, compared with 902 resident and 98 non-resident notifications during last year.

In accordance with the Council's decision to make further efforts in the control of Malaria, an anti-malaria officer was appointed, native staff employed and a laboratory established on the top floor of the Town Hall. This unit, after training, commenced to function during August.

Anti-malarial work was carried out throughout the year consisting of straightening and clearing the many streams, cutting drains and filling depressions as well as attending to the concrete canals.

Extensive organised oiling was carried out, 9,943 gallons of oil being used and spraying fluid was issued to the extent of 600 gallons.

Details of the methods employed will be found in the report.

The total number of rats trapped in the the Commercial area namely, 41,282 constitutes a record.

A percentage of the daily catch is examined at the laboratory, thus during the last three months of the year, 645 rats were examined and three found positive to *B. pestis*.

During the latter part of the year, the Council selected a new site for a native pagan burial ground in place of the unsuitable one that had been in existence for some years. The new burial ground is situated just outside the Municipal border off the road to the civil aerodrome.

Council again considered the advisability of erecting a modern crematorium, but did not come to a definite decision.

Towards the end of the year it was decided to establish an ambulance service. The ambulance has been ordered and the service should be in operation about April, 1938.

During the early part of the year and again during September and December, a serious water shortage was experienced which necessitated restrictions being imposed.

Frequent bacteriological examinations of the water supply showed that the general satisfactory quality of the supply was maintained.

The pipe line in connection with the new Ruiru supply has been laid and the new 1,000,000-gallon tank and treatment works are in course of construction.

Attention is drawn in this report to the serious problem caused by the lack of sufficient housing accommodation, both for Asians and Natives, with the consequence that overcrowding is rife and cannot be dealt with as energetically as could be desired.

In the report for last year the hope was expressed that a scheme whereby the inspection of milk coming from unregistered sources would be brought into operation.

Although the depot has been prepared, the hope has not been realized, as approval of the necessary regulations has been withheld.

Work in connection with the scrutiny of plans and inspections of works in progress continues to increase, during the year 1939 inspections being made in connection with 396 plans.

Improvement in the sanitation of the town has progressed as rapidly as could be expected.

Over 7,000 feet of sewers were constructed in the Commercial area and progress was made with the new outfall sewer.

The method of night soil collection by the single bucket system and the method of disposal by trenching remain unchanged from previous years. The daily number of buckets conserved totalled 3,385, compared with 3,138 during 1936.

There are now 1,572 water closets in use connected to the sewers and a total of 533 septic tanks and 13 conserving tanks are in use.

Repairs and additions to the refuse destructor necessitated the dumping of refuse during the year.

In spite of a decreased amount of available inspectors' time due to overseas leave, 8,267 premises were inspected for nuisances and 1,305 defects were remedied, compared with 7,164 inspections and 881 defects remedied during 1936.

Two hundred and ninety-six Statutory Notices were served and eight dwellings were dealt with under Closing Orders.

From the month of June, the conduct of the abattoir was placed under the control of the Public Health Department.

The total number of animals slaughtered during the year amounted to 55,975 exceeding the figure for the previous year by 991. The increase was due to the larger number of goats and sheep slaughtered.

The percentage of oxen condemned for all causes reached the total of 21.3 per cent, compared with 21.3 for 1936 and the percentage of oxen condemned for measles was 19.0 per cent, compared with 18.3 per cent for the previous year, this increase was shared by both grade and native oxen.

The report on Child Welfare Services which is included in this report is worthy of note. It will be seen that attendances at the Child Welfare Clinics

increased from 25,190 to 36,824 and the number of Home Visits increased from 12,532 to 15,812. The work of these services is now at about saturation point considering the number of staff.

The only alteration in the number of the personnel of the Public Health Department during the year, was the appointment of Mr. G. R. C. van Someren as Anti-Malaria Officer in February.

Dr. E. F. Hartley resigned her position as Lady Medical Officer and Dr. E. N. Hartley was appointed in her place in February.

Miss P. Benjamin was appointed Health Visitor to the Indian Clinic in September, Mrs. E. Dugmore having resigned from her position as Health Visitor at the Pumwani Clinic.

Two Inspectors being away on overseas leave reduced the time available for district duties considerably.

The post of Chief Sanitary Inspector has not yet been filled.

The annual expenditure of the Public Health Department during 1937 amounted to £10,475, compared with £9,219 for 1936. The increase was due mainly to the institution of further anti-malarial measures, increased expenditure in connection with Child Welfare Services and the amount expended on passages.

2. GEOGRAPHICAL.

Nairobi, the capital of Kenya, is situated in the highlands about 250 miles from the coast and is 330 miles by rail from the port of Mombasa and 257 miles by rail from Kisumu on Lake Victoria.

The geographical position is:—

Latitude: 1° 16' 43" South.

Longitude: 36° 50' East.

Height above sea level: From 5,452 feet to 5,700 feet.

Area of Municipality: 20,712 acres or 32.4 square miles.

3. METEOROLOGICAL.

The meteorological observations regarding pressure were taken at Kabete Observatory at 5,987 feet, and those relating to temperature and humidity were taken at a station in the Railway Offices at 5,495 feet above sea level.

| Month. | Atmospheric pressure. corrected. | Relative humidity. | TEMPERATURE. | | | | |
|-----------|--|-----------------------|--------------|---------------|------|--------------|-------|
| | | | Max. | Mean. max. | Min. | Mean min. | Mean. |
| | in. | % | F. | F. | F. | F. | F. |
| January | 24.197 | 54 | 85.8 | 81.8 | 52.2 | 57.2 | 69.5 |
| February | 24.206 | 53 | 88.8 | 84.6 | 53.2 | 59.1 | 71.9 |
| March | 24.186 | 66 | 86.0 | 81.0 | 53.3 | 58.9 | 69.9 |
| April | 24.214 | 74 | 79.1 | 76.4 | 53.7 | 59.6 | 68.0 |
| May | 24.256 | 74 | 77.6 | 73.5 | 55.9 | 58.4 | 65.9 |
| June | 24.270 | 78 | 75.4 | 70.2 | 53.2 | 57.1 | 63.7 |
| July | 24.272 | 74 | 79.9 | 71.2 | 47.0 | 53.6 | 62.4 |
| August | 24.284 | 69 | 80.0 | 71.8 | 48.0 | 53.9 | 62.9 |
| September | 24.260 | 58 | 85.0 | 80.3 | 47.7 | 54.5 | 67.4 |
| October | 24.254 | 67 | 83.9 | 76.6 | 51.1 | 57.2 | 66.9 |
| November | 24.220 | 68 | 80.0 | 76.8 | 52.0 | 58.2 | 67.5 |
| December | 24.211 | 70 | 80.1 | 74.7 | 50.0 | 57.3 | 66.0 |
| YEAR | 24.236 | 67 | 88.8 | 76.6 | 47.0 | 57.1 | 66.8 |

4. RAINFALL.

The following rainfall records are from the Hill Station at 5,700 feet above sea level.

| RAINFALL. | | | | | | DAYS OF RAIN. | | | |
|-----------|-----|-----|-------|-----------------------|-------|---------------|-------|----------------------|-----|
| Month. | | | 1937. | Average. 31 years. | | | 1937. | Average 31 years. | |
| January | ... | ... | 0.38 | ... | 1.63 | ... | 2 | ... | 5 |
| February | | ... | 0.01 | ... | 2.29 | ... | 1 | ... | 5 |
| March | ... | ... | 4.48 | ... | 4.53 | ... | 12 | ... | 10 |
| April | ... | ... | 13.58 | ... | 8.22 | ... | 26 | ... | 17 |
| May | ... | ... | 12.12 | ... | 5.34 | ... | 20 | ... | 16 |
| June | ... | ... | 7.60 | ... | 1.79 | ... | 16 | ... | 8 |
| July | ... | ... | 0.29 | ... | 0.66 | ... | 4 | ... | 5 |
| August | ... | ... | 0.16 | ... | 0.98 | ... | 4 | ... | 6 |
| September | | ... | 0.22 | ... | 1.09 | ... | 4 | ... | 6 |
| October | ... | ... | 5.58 | ... | 2.23 | ... | 13 | ... | 8 |
| November | | ... | 6.09 | ... | 4.74 | ... | 14 | ... | 15 |
| December | | ... | 2.32 | ... | 2.67 | ... | 10 | ... | 10 |
| Annual | ... | | 52.83 | ... | 36.17 | ... | 126 | ... | 111 |

After four consecutive years of rainfall below the average, Nairobi registered a good year totalling 52.83 inches, being 46% above the average for 31 years.

Rainfalls of over 50 inches occurred previously in the years 1930, 1923, 1920, 1917, and 1912.

April, May, June, October, and November registered rainfall greater than the average, whilst the falls during April, June, and November constitute a record for these months.

The average monthly rainfall for the year was 4.40 inches compared with the average over 31 years of 3.01 inches.

The days of rain totalled 126 compared with an average of 111, whilst the average fall of rain per rainy day during the year, amounted to 0.44 inches compared with the average over 31 years of 0.32 inches.

SEASONAL RAINFALL.

| Season. | | 1937. | Average 31 years. | |
|---|--------|-------|----------------------|-------|
| Short dry season (January-February) | ... | 0.39 | ... | 3.92 |
| Long rains (March, April, May) | ... .. | 30.18 | ... | 18.09 |
| Long dry season (June to September) | ... | 8.27 | ... | 4.52 |
| Short rains (October, November, December) | | 13.99 | ... | 9.64 |
| Annual | ... .. | 52.83 | ... | 36.17 |

It will be noted that the short dry season is the only one below the average, the others in their order exceeding the average by 66%, 83%, and 45% respectively.

The longest period without rain was 27 days during December, 1936—January, 1937, the next longest being 26 days during February—March.

ANNUAL RAINFALL.

| Year. | Inches. | Year. | Inches. | Year. | Inches. |
|-------|-----------|-------|-----------|-------|-----------|
| 1897 | ... 27.5 | 1911 | ... 41.49 | 1925 | ... 27.83 |
| 1898 | ... 28.1 | 1912 | ... 56.01 | 1926 | ... 33.25 |
| 1899 | ... 27.5 | 1913 | ... 31.04 | 1927 | ... 24.86 |
| 1900 | ... 44.3 | 1914 | ... 42.18 | 1928 | ... 28.91 |
| 1901 | ... 40.7 | 1915 | ... 28.88 | 1929 | ... 36.50 |
| 1902 | ... 32.9 | 1916 | ... 43.59 | 1930 | ... 58.88 |
| 1903 | ... 40.7 | 1917 | ... 51.44 | 1931 | ... 39.58 |
| 1904 | ... 26.9 | 1918 | ... 23.05 | 1932 | ... 39.85 |
| 1905 | ... 59.3 | 1919 | ... 38.74 | 1933 | ... 22.68 |
| 1906 | ... 46.7 | 1920 | ... 51.19 | 1934 | ... 23.12 |
| 1907 | ... 41.98 | 1921 | ... 18.49 | 1935 | ... 31.24 |
| 1908 | ... 27.90 | 1922 | ... 37.28 | 1936 | ... 30.87 |
| 1909 | ... 29.02 | 1923 | ... 56.22 | 1937 | ... 52.85 |
| 1910 | ... 25.64 | 1924 | ... 26.72 | | |

Records for the years 1897 to 1906 are relatively accurate only.

5. POPULATION.

The population of the Municipality of Nairobi for 1937 has been estimated as under:—

| Race. | Population. |
|-----------------------|---------------|
| European | 6,000 |
| Asian | 17,300 |
| Native and others ... | 38,000 |
| TOTAL | 61,300 |

This total shows an increase compared with 1936 when the population was estimated at 49,600.

It is estimated that Europeans have increased by 400, Asians by 1,300, and Natives by 10,000.

Until the next Census, which is due in 1941, is compiled, these figures must be regarded as approximate only.

6. MARRIAGES.

The following marriages were celebrated in Nairobi during 1937. The figures are not corrected for persons habitually resident in Nairobi.

| | | |
|-------------|--------|-------|
| British | ... .. | 83 |
| German | ... .. | 3 |
| Goan | ... .. | 7 |
| Seychellois | ... .. | 10 |
| | | <hr/> |
| | | 103 |
| | | <hr/> |

7. BIRTHS.

“The Nairobi Municipality (Notification of Births) By-laws, 1933,” require any birth whether alive or dead, occurring within the Municipality to be notified within 48 hours, no races being exempt.

These by-laws have now been in force some years and the results are getting more accurate. The statistics obtained from these notifications are set out in the table under:—

NOTIFICATION OF BIRTHS, 1937.

| | RESIDENT. | | | | | | NON-RESIDENT. | | | | | | TOTAL. | |
|---------------|-----------|-----|--------|--------------|----|--------|---------------|-----|--------|--------------|----|--------|---------|------|
| | Births. | | | Stillbirths. | | | Births. | | | Stillbirths. | | | Births. | S.B. |
| | M. | F. | Total. | M. | F. | Total. | M. | F. | Total. | M. | F. | Total. | | |
| British ... | 25 | 33 | 58 | — | — | — | 23 | 14 | 37 | — | — | — | 95 | — |
| American ... | — | — | — | — | — | — | 1 | — | 1 | — | — | — | 1 | — |
| Danish ... | 1 | — | 1 | — | — | — | — | — | — | — | — | — | 1 | — |
| Norwegian | — | — | — | — | — | — | — | 1 | 1 | — | — | — | 1 | — |
| German ... | 1 | 1 | 2 | — | — | — | — | 1 | 1 | — | — | — | 3 | — |
| Italian ... | — | 1 | 1 | — | — | — | — | — | — | — | — | — | 1 | — |
| Greek ... | — | — | — | — | — | — | — | 1 | 1 | — | — | — | 1 | — |
| Polish ... | — | 1 | 1 | — | — | — | — | — | — | — | — | — | 1 | — |
| Syrian ... | — | 1 | 1 | — | — | — | — | — | — | — | — | — | 1 | — |
| Indian ... | 194 | 162 | 356 | 6 | 1 | 7 | 22 | 14 | 36 | 2 | 3 | 5 | 392 | 12 |
| Goan ... | 42 | 41 | 83 | 1 | 1 | 2 | 1 | 2 | 3 | — | — | — | 86 | 2 |
| Cingalese ... | 1 | 1 | 2 | — | — | — | — | — | — | — | — | — | 2 | — |
| Native ... | 240 | 206 | 446 | 9 | 9 | 18 | 92 | 108 | 200 | 11 | 3 | 14 | 646 | 32 |
| Arab ... | 1 | 2 | 3 | — | — | — | — | 1 | 1 | — | — | — | 4 | — |
| Nubian ... | — | 2 | 2 | — | — | — | — | 1 | 1 | — | — | — | 3 | — |
| Sudanese ... | — | 2 | 2 | — | — | — | — | — | — | — | — | — | 2 | — |
| Seychellois | 1 | 4 | 5 | — | — | — | — | — | — | — | — | — | 5 | — |
| Total ... | 506 | 457 | 963 | 16 | 11 | 27 | 139 | 143 | 282 | 13 | 6 | 19 | 1245 | 46 |

MULTIPLE BIRTHS.

Twins were recorded in three instances among residents, one being Goanese with two female children and the other two Natives with one male and one female child.

Amongst non-residents, five instances of twins were recorded. Two Indian cases, one with two of the male sex and the other with one male and one female child, the remaining three instances being among Natives. In two cases both the children were of female sex and in one case the sex was divided.

BIRTH RATES.

In the following table will be found the crude and true birth rates for the races, together with the natural increase.

It will be noted that the true birth rate for all races is 14.6 and the crude rate 15.7. This compares with the figure of 13.7 for 1936. This rather large difference may be partially due to a more accurate notification of births.

It is interesting to note that the birth rate for England and Wales during 1936 was 14.8 and for British India during 1934 the rate was 34, but no suitable comparative figures can be obtained for the Native race except perhaps the Union of South Africa where the rates vary between 12.4 and 53.5.

BIRTH RATES AND NATURAL INCREASE.

| | Crude | | Live | | True | | Natural | | Rate per |
|------------------------|---------|-------|---------|-------|-------|-------|---------|-----------|----------|
| | No. of | birth | births. | rate. | birth | rate. | No. of | increase. | 1,000 |
| | births. | | | | | | deaths. | | popln. |
| European ... | 64 | 10.6 | 64 | 10.6 | 42 | 22 | 3.6 | | |
| Asian ... | 441 | 25.4 | 432 | 24.9 | 285 | 147 | 8.5 | | |
| Natives and others ... | 458 | 12.0 | 440 | 11.5 | 713 | —273 | —7.2 | | |
| Total | 963 | 15.7 | 936 | 14.6 | 1040 | —104 | —1.7 | | |

STILLBIRTHS.

In the table following will be found figures relating to the incidence of stillbirths. The considerable difference between the figures for residents and non-residents is worthy of note.

STILLBIRTHS AMONG RESIDENTS.

| Race. | | Births. | Stillbirths. | Percentage to births. |
|----------|-----|---------|--------------|--------------------------|
| European | ... | 64 | — | 0.0 |
| Goan | ... | 83 | 2 | 2.4 |
| Indian | ... | 356 | 7 | 1.9 |
| Natives | ... | 446 | 18 | 4.0 |
| Others | ... | 14 | — | 0.0 |
| Total | ... | 963 | 27 | 2.8 |

STILLBIRTHS AMONG NON-RESIDENTS.

| Race. | | Births. | Stillbirths. | Percentage to births. |
|----------|-----|---------|--------------|--------------------------|
| European | ... | 41 | — | 0.0 |
| Goan | ... | 3 | — | 0.0 |
| Indian | ... | 36 | 5 | 13.9 |
| Native | ... | 200 | 14 | 7.0 |
| Others | ... | 2 | — | 0.0 |
| Total | ... | 282 | 19 | 6.7 |

8. DEATHS.

Unless otherwise stated, the following statistics refer to residents of Nairobi only, including the prison population. Figures have been corrected for outward transfers but not for inward transfers.

Rates have been calculated on the estimated population for 1937.

The total number of deaths reported in Nairobi during the year was 1,411, equivalent to a crude death rate for all races of 23.01 per thousand persons, compared with a rate of 23.29 for 1936.

The number of deaths from all causes among persons stated to be normally resident in Nairobi was 1,040, equivalent to a recorded death rate for all races of 16.96 per thousand persons, compared with 15.92 for 1936 and 13.90 for 1935.

Of the 1,040 deaths among residents, 725 were of males and 315 were of females.

290 or 27.8% of the deaths were of infants under one year of age.

42 deaths occurred among Europeans, 26 being males and 16 females, equivalent to a rate of 6.99 per thousand persons of that race.

285 deaths occurred among Asiatics, 164 being males and 121 females, equivalent to a rate of 16.47 per thousand persons of that race.

713 deaths occurred among Natives and other races, 535 being males and 178 females, equivalent to a rate of 18.75 per thousand persons.

DEATHS BY RACE AND SEX.

| 1937. | White. | Indian. | Goan. | Native. | Somali. | Arab. | Nubian. | Sey- chellois. | Cin- galese. | Total. |
|----------------|--------|---------|-------|---------|---------|-------|---------|-------------------|-----------------|--------|
| Resident : | | | | | | | | | | |
| M. ... | 26 | 149 | 15 | 521 | 11 | 2 | 1 | — | — | 725 |
| F. ... | 16 | 117 | 4 | 168 | 4 | 2 | — | 3 | 1 | 315 |
| Total | 42 | 266 | 19 | 689 | 15 | 4 | 1 | 3 | 1 | 1040 |
| Non-resident : | | | | | | | | | | |
| M. ... | 16 | 4 | — | 233 | — | — | 1 | — | — | 254 |
| F. ... | 11 | — | — | 106 | — | — | — | — | — | 117 |
| Total | 27 | 4 | — | 339 | — | — | 1 | — | — | 371 |
| TOTAL | 69 | 270 | 19 | 1028 | 15 | 4 | 2 | 3 | 1 | 1411 |

COMPARISON OF DEATH RATES FOR RACES FOR 12 YEARS.

| | | European. | | Asiatic. | | Native. | | All Races. |
|------|-----|-----------|-----|----------|-----|---------|-----|------------|
| 1926 | ... | 13.5 | ... | 30.3 | ... | 17.3 | ... | 20.5 |
| 1927 | ... | 13.8 | ... | 29.2 | ... | 16.5 | ... | 18.9 |
| 1928 | ... | 12.8 | ... | 23.3 | ... | 16.1 | ... | 17.9 |
| 1929 | ... | 8.4 | ... | 17.0 | ... | 13.4 | ... | 13.7 |
| 1930 | ... | 11.8 | ... | 20.7 | ... | 15.2 | ... | 16.2 |
| 1931 | ... | 4.7 | ... | 14.3 | ... | 15.2 | ... | 13.7 |
| 1932 | ... | 5.6 | ... | 13.5 | ... | 10.7 | ... | 11.0 |
| 1933 | ... | 7.1 | ... | 14.8 | ... | 15.0 | ... | 14.0 |
| 1934 | ... | 8.5 | ... | 15.1 | ... | 15.9 | ... | 14.8 |
| 1935 | ... | 6.1 | ... | 12.2 | ... | 16.4 | ... | 13.9 |
| 1936 | ... | 8.9 | ... | 16.1 | ... | 17.3 | ... | 15.9 |
| 1937 | ... | 6.9 | ... | 16.4 | ... | 18.7 | ... | 16.9 |

AVERAGE DEATH RATES.

| Race. | | 10 years' average 1928-37. | | 5 years' average 1928-32. | | 5 years' average 1933-37. | | 1937. |
|--------------|-----|----------------------------------|-----|---------------------------------|-----|---------------------------------|-----|-------|
| European ... | ... | 8.0 | ... | 8.6 | ... | 7.5 | ... | 6.9 |
| Asiatic ... | ... | 16.3 | ... | 17.7 | ... | 14.5 | ... | 16.4 |
| Native ... | ... | 15.3 | ... | 14.1 | ... | 16.6 | ... | 18.7 |
| All races | ... | 14.8 | ... | 14.5 | ... | 15.1 | ... | 16.9 |

It will be noted that the European death rate during the past five years has declined by 1.1 below that for the previous five years, whilst the rate for Asiatics has decreased by 3.2, but the rates for Natives and All Races compared with similar periods has increased by 2.5 and 0.6 respectively.

The European death rate for 1937 is below that of the average for the past five years by 0.6 whilst the death rate for Asiatics, Natives, and All Races for 1937 compared with the average for the past five years have increased by 1.9, 2.1, and 1.8 respectively.

MONTHLY INCIDENCE OF DEATHS BY RACE.

| Month. | White. | Indian. | Goan. | Native. | Somali. | Arab. | Nubian | Seychellois. | Cingalese. | Total. | Percentage of total. |
|---------------|--------|---------|-------|---------|---------|-------|--------|--------------|------------|--------|----------------------|
| January ... | 4 | 14 | — | 34 | — | — | — | — | — | 57 | 5.5 |
| February ... | 3 | 14 | 2 | 44 | 1 | 1 | — | — | — | 65 | 6.2 |
| March ... | 3 | 28 | 2 | 54 | 1 | 1 | — | 1 | — | 90 | 8.6 |
| April ... | 7 | 27 | — | 70 | — | — | — | 1 | — | 105 | 10.1 |
| May ... | 1 | 31 | 4 | 69 | 2 | — | — | — | — | 107 | 10.3 |
| June ... | 6 | 38 | 1 | 68 | 1 | — | — | — | — | 114 | 11.0 |
| July ... | 5 | 22 | 4 | 82 | 1 | — | — | — | 1 | 115 | 11.1 |
| August ... | 6 | 11 | 2 | 56 | 3 | 1 | — | — | — | 79 | 7.6 |
| September ... | 2 | 20 | 2 | 65 | 2 | 1 | — | — | — | 92 | 8.8 |
| October ... | 2 | 22 | 1 | 41 | 1 | — | 1 | — | — | 68 | 6.5 |
| November ... | 1 | 21 | 1 | 60 | 2 | — | — | — | — | 85 | 8.2 |
| December ... | 2 | 18 | — | 41 | 1 | — | — | 1 | — | 63 | 6.1 |
| Total ... | 42 | 266 | 19 | 689 | 15 | 4 | 1 | 3 | 1 | 1040 | 100.00 |

DEATHS BY QUARTERS.

| | Number of deaths. | Percentage of total. |
|--------------------|-------------------|----------------------|
| First quarter ... | 212 | 20.4 |
| Second quarter ... | 326 | 31.3 |
| Third quarter ... | 286 | 27.5 |
| Fourth quarter ... | 216 | 20.8 |
| Total ... | 1040 | 100.00 |

The most deaths occurred in July (115), June (114), May (107), and the fewest in January (57), December (63), February (65).

CAUSES OF DEATHS BY GROUP AND RACE.

| International cause of death. | White. | Indian. | Goan. | Native. | Somali. | Arab. | Nubian. | Seychellois. | Cingalese. | Total. |
|---|--------|---------|-------|---------|---------|-------|---------|--------------|------------|--------|
| 1. General diseases ... | 4 | 32 | 3 | 143 | 2 | — | — | — | — | 184 |
| 2. General diseases (not included above) ... | 4 | 29 | 2 | 14 | — | — | — | — | — | 49 |
| 3. Diseases of the nervous system ... | 5 | 10 | — | 22 | 2 | — | — | — | — | 39 |
| 4. Diseases of the circulatory system ... | 4 | 5 | — | 12 | — | — | 1 | — | — | 22 |
| 5. Diseases of the respiratory system ... | 7 | 81 | 6 | 350 | 9 | 3 | — | — | 1 | 457 |
| 6. Diseases of the digestive system ... | 1 | 27 | 4 | 47 | 1 | 1 | — | 1 | — | 82 |
| 7 Non-venereal diseases of the genito urinary system and annexa ... | 4 | 6 | 1 | 5 | — | — | — | — | — | 16 |
| 8. The puerperal state ... | — | 7 | — | 7 | — | — | — | — | — | 14 |
| 9. Diseases of the skin ... | — | 1 | 1 | 1 | — | — | — | — | — | 3 |
| 10. Diseases of the bones ... | — | — | — | 1 | 1 | — | — | — | — | 2 |
| 11 Congenital malformations | 2 | 4 | — | 2 | — | — | — | — | — | 8 |
| 12. Diseases of early infancy | 5 | 35 | 2 | 33 | — | — | — | 2 | — | 77 |
| 13. Old age ... | 2 | 4 | — | 4 | — | — | — | — | — | 10 |
| 14. External causes ... | 3 | 13 | — | 30 | — | — | — | — | — | 46 |
| 15. Ill-defined causes ... | 1 | 12 | — | 18 | — | — | — | — | — | 31 |
| Total ... | 42 | 266 | 19 | 689 | 15 | 4 | 1 | 3 | 1 | 1040 |

CAUSES OF DEATH BY GROUP WITH THE PERCENTAGE TO TOTAL AND
RATE PER 1,000 POPULATION.

| International cause of death. | Number. | % of total. | Rate per 1,000 population. |
|---|---------|-------------|----------------------------|
| 1. General diseases | 184 | 17.69 | 3.001 |
| 2. General diseases (not included above) ... | 49 | 4.71 | 0.799 |
| 3. Diseases of nervous system | 39 | 3.75 | 0.636 |
| 4. Diseases of the circulatory system ... | 22 | 2.12 | 0.358 |
| 5. Diseases of the respiratory system ... | 457 | 43.94 | 7.453 |
| 6. Diseases of the digestive system ... | 82 | 7.89 | 1.337 |
| 7. Non-venereal diseases of the genito- urinary system and annexa | 16 | 1.54 | 0.260 |
| 8. The puerperal state | 14 | 1.35 | 0.228 |
| 9. Diseases of the skin | 3 | 0.29 | 0.048 |
| 10. Diseases of the bones | 2 | 0.19 | 0.032 |
| 11. Congenital malformations | 8 | 0.77 | 0.130 |
| 12. Diseases of early infancy | 77 | 7.40 | 1.255 |
| 13. Old age | 10 | 0.96 | 0.163 |
| 14. External causes | 46 | 4.42 | 0.750 |
| 15. Ill-defined causes | 31 | 2.98 | 0.505 |
| Total | 1040 | 100.00 | 16.962 |

The incidence of the various causes of death in relation to the groups is commented upon hereunder.

The figures in brackets in the text relate to the returns for 1936.

In comparing the deaths during 1937 with the previous year, it should be noted that there is a substantial increase of deaths under "General diseases" during the present year, the main individual increases being under cancer and tuberculosis.

Although "Diseases of the nervous system" showed a decrease in the total, there was a large increase in the number of deaths from cerebral haemorrhage.

Deaths from respiratory diseases increased from 340 to 457, this increase being mainly due to the pneumonias.

Over double the number of deaths during 1936 under "Diseases of digestive system" were recorded in 1937, there being a large increase in the cases of infantile and adult diarrhoea.

Puerperal sepsis and other conditions of childbirth were responsible for an increase in the deaths under the group "The puerperal state."

"Diseases of the respiratory system" as heretofore is the group concerned with the greatest number of deaths.

This group accounted 457 (340) deaths or 43.9% (42.7%) of the total deaths, equivalent to a rate of 7.45 (6.80) per thousand of population.

Deaths under this heading were:—

| | |
|--------------------------|-----------|
| Pneumonia | 301 (229) |
| Broncho pneumonia | 136 (97) |
| Bronchitis | 8 (8) |
| Oedema larynx | 4 |
| Pleurisy | 2 |
| Asthma | 2 (5) |
| Abscess of lung | 2 (1) |
| Empyema | 1 |
| Pulmonary oedema | 1 |

“General diseases” is the next important group in point of numbers with 184 (145) deaths or 17.6% (18.2%) of the total deaths equal to a rate of 3.00 (2.90) per thousand population.

Deaths under this group include:—

| | | | | | | | |
|--------------------------|-----|-----|---------|------------------|-----|-----|-------|
| Malaria | ... | ... | 38 (32) | Measles | ... | ... | 5 (6) |
| Tuberculosis | ... | ... | 30 (16) | Diphtheria | ... | ... | 4 (2) |
| Plague | ... | ... | 22 (5) | Influenza | ... | ... | 3 (4) |
| Cerebrospinal meningitis | ... | ... | 18 (16) | Tetanus | ... | ... | 3 (4) |
| Dysentery | ... | ... | 16 (5) | Blackwater fever | ... | ... | 2 (4) |
| Septicaemia | ... | ... | 16 (13) | Whooping cough | ... | ... | 1 (6) |
| Syphilis | ... | ... | 15 (23) | Leprosy | ... | ... | 1 |
| Typhoid fever | ... | ... | 9 (7) | Erysipelas | ... | ... | 1 (4) |

The group headed “Diseases of the digestive system” is next in importance with 82 (40) deaths, or 7.8% (5.0%) of the total deaths, equivalent to a rate of 1.33 (0.8) per thousand population.

The individual causes were:—

| | | | | | | | |
|------------------------|-----|-----|---------|----------------------|-----|-----|-------|
| Diarrhoea (under 2) | ... | ... | 57 (22) | Gastric ulcer | ... | ... | 2 (1) |
| Diarrhoea (over 2) | ... | ... | 11 (2) | Appendicitis | ... | ... | 1 (1) |
| Intestinal obstruction | ... | ... | 8 (6) | Yellow atrophy liver | ... | ... | 1 |
| Peritonitis | ... | ... | 2 (1) | | | | |

The deaths under the heading “Diseases of early infancy” totalled 77 (76) or 7.4% (9.5%) of the total deaths, the equivalent rate per thousand population being 1.25 (1.52).

The causes of death were:—

| | | | | | | | |
|---------------------|-----|-----|---------|--------------------|-----|-----|---|
| Congenital debility | ... | ... | 37 (38) | Atelectasis | ... | ... | 1 |
| Prematurity | ... | ... | 31 (29) | Icterus neonatorum | ... | ... | 1 |
| Asphyxia neonatorum | ... | ... | 3 (5) | Haematemesis | ... | ... | 1 |
| Peritonitis | ... | ... | 2 | Omphalitis | ... | ... | 1 |

The second group of “General diseases” is next on the list with 49 (25) deaths or 4.7% (3.1%) of the total deaths, making a rate per thousand population of 0.7 (0.5).

The diseases concerned were:—

| | | | | | | | |
|---------------------------|-----|-----|--------|-----------------|-----|-----|-------|
| Cancer | ... | ... | 13 (8) | Alcoholism | ... | ... | 2 (1) |
| Rickets | ... | ... | 9 (5) | Anaemia | ... | ... | 2 (3) |
| Diabetes | ... | ... | 8 (2) | Cretinism | ... | ... | 1 (1) |
| Scurvy and Kikuyu disease | ... | ... | 5 | Purpura | ... | ... | 1 |
| Leukaemia | ... | ... | 3 | Ruptured spleen | ... | ... | 1 |
| Rheumatism | ... | ... | 4 (2) | | | | |

“External causes” is the next group in order of numbers with 46 (40) deaths or 4.4% (5.0%) of the total deaths, equivalent to a rate of 0.75 (0.80) per thousand population.

Deaths under this group include:—

| | | | | | | | |
|------------------|-----|-----|---------|----------------------------|-----|-----|-------|
| Road accident | ... | ... | 13 (11) | Homicide | ... | ... | 3 (3) |
| Burns | ... | ... | 10 (1) | Fracture | ... | ... | 2 (2) |
| Judicial hanging | ... | ... | 7 (13) | Fall | ... | ... | 1 |
| Suicide | ... | ... | 6 (5) | Foreign body in oesophagus | ... | ... | 1 |
| Drowning | ... | ... | 3 (3) | | | | |

The group "Diseases of the nervous system" was responsible for 39 (36) deaths or 3.7% (4.5%) of the total deaths with an equivalent rate per thousand population of 0.63 (0.72).

The details were:—

| | | | |
|--------------------------|---------|---------------------|-------|
| Cerebral haemorrhage ... | 16 (4) | Myelitis ... | 1 (1) |
| Meningitis ... | 10 (13) | Epilepsy ... | 1 (1) |
| Convulsions ... | 8 (4) | Brain tumour ... | 1 (2) |
| Brain abscess ... | 1 (2) | Mastoid disease ... | 1 |

"Ill-defined causes" is next in order of numbers with 31 (31) deaths or 2.9% (3.8%) of the total deaths, the equivalent rate per thousand population being 0.50 (0.62).

The recorded causes under this group were:—

| | | | |
|--------------------|--------|-----------------|---|
| Unknown ... | 9 (18) | Debility ... | 1 |
| Heart failure ... | 8 (7) | Collapse ... | 1 |
| Natural causes ... | 5 (2) | Anaesthetic ... | 1 |
| P.U.O. ... | 5 (1) | Shock ... | 1 |

"Diseases of the circulatory system" accounted for 22 (23) deaths or 2.1% (2.8%) of the total deaths with an equivalent rate per thousand population of 0.35 (0.46).

The diseases under this heading include:—

| | | | |
|-------------------|---------|------------------|-------|
| Heart disease ... | 19 (16) | Pericarditis ... | 1 (1) |
| Endocarditis ... | 2 (1) | | |

"Non-venereal diseases of the genito-urinary system and annexa" comes next with 16 (17) deaths or 1.5% (2.1%) of the total deaths, the equivalent rate per thousand population being 0.26 (0.34).

The causes of death were:—

| | | | |
|---------------------|---------|------------------|-------|
| Nephritis ... | 11 (13) | Pyo-metritis ... | 1 (1) |
| Pyelo nephritis ... | 2 | Prostatitis ... | 1 |
| Pyelitis ... | 1 | | |

"The puerperal state" was accountable for 14 (8) deaths or 1.3% (1.0%) of the total deaths, making a rate per thousand population of 0.22 (0.16).

The diseases concerned were:—

| | | | |
|----------------------|-------|----------------------------|-------|
| Puerperal sepsis ... | 6 (1) | Postpartum haemorrhage ... | 2 (1) |
| Child birth ... | 5 | Eclampsia ... | 1 (3) |

The group "Congenital malformation" was responsible for 8 (6) deaths or 0.7% (0.7%) of the total deaths, equivalent to a rate per thousand population of 0.13 (0.12).

The items were:—

| | | | |
|-------------------|-------|----------------------|-------|
| Heart disease ... | 3 (2) | Monstrosity ... | 1 (1) |
| Anencephalus ... | 1 (1) | Pyloric stenosis ... | 1 |
| Cleft palate ... | 1 | Spina bifida ... | 1 |

Three deaths occurred under the group "Diseases of the skin," the causes being:—

| | |
|---------------------|---|
| Gangrene of jaw ... | 2 |
| Cellulitis ... | 1 |

and there were two deaths recorded under the group "Diseases of the bones," the cause being arthritis in each instance.

AGE GROUP DISTRIBUTION OF POPULATION AND DEATH BY RACES.

EUROPEAN.

| POPULATION. | | | | | DEATHS. | | | | |
|-------------|-------------------------|-----------------------|-------|-----|---------|-----------------|------|---------------|---------|
| Age group. | Estimated distribution. | Estimated population. | | | Number. | % of age group. | | Distribution. | |
| 0—1 | ... | 37.865 | ... | 227 | ... | 7 | ... | 3.08 | ... |
| 2—4 | ... | 55.548 | ... | 333 | ... | — | ... | — | ... |
| 5—9 | ... | 81.706 | ... | 490 | ... | — | ... | — | ... |
| 10—14 | ... | 50.914 | ... | 306 | ... | 1 | ... | 0.32 | ... |
| 15—19 | ... | 45.609 | ... | 274 | ... | — | ... | — | ... |
| 20—24 | ... | 82.743 | ... | 495 | ... | — | ... | — | ... |
| 25—29 | ... | 124.754 | ... | 749 | ... | — | ... | — | ... |
| 30—34 | ... | 126.645 | ... | 760 | ... | 1 | ... | 0.13 | ... |
| 35—39 | ... | 117.864 | ... | 707 | ... | 1 | ... | 0.14 | ... |
| 40—44 | ... | 94.644 | ... | 568 | ... | 3 | ... | 0.52 | ... |
| 45—49 | ... | 66.340 | ... | 398 | ... | 5 | ... | 1.25 | ... |
| 50—54 | ... | 48.692 | ... | 292 | ... | 5 | ... | 1.71 | ... |
| 55—59 | ... | 29.877 | ... | 179 | ... | 5 | ... | 2.79 | ... |
| 60—64 | ... | 18.597 | ... | 112 | ... | 6 | ... | 5.35 | ... |
| 65—69 | ... | 9.268 | ... | 56 | ... | 1 | ... | 1.78 | ... |
| 70—74 | ... | 5.121 | ... | 31 | ... | 3 | ... | 9.67 | ... |
| 75—79 | ... | 2.560 | ... | 15 | ... | 1 | ... | 6.66 | ... |
| 80—84 | ... | 0.914 | ... | 6 | ... | 1 | ... | 16.66 | ... |
| 85—89 | ... | 0.060 | ... | 2 | ... | 2 | ... | 100.00 | ... |
| 90—94 | ... | — | ... | — | ... | — | ... | — | ... |
| | 999.990 | ... | 6,000 | ... | 42 | ... | 0.70 | ... | 999.978 |

ASIATIC.

| POPULATION. | | | | | DEATHS. | | | | |
|-------------|-------------------------|-----------------------|--------|------|---------|-----------------|------|---------------|---------|
| Age group. | Estimated distribution. | Estimated population. | | | Number. | % of age group. | | Distribution. | |
| 0—1 | ... | 63.319 | ... | 1078 | ... | 152 | ... | 14.10 | ... |
| 2—4 | ... | 93.620 | ... | 1620 | ... | 21 | ... | 1.29 | ... |
| 5—9 | ... | 111.620 | ... | 1931 | ... | 9 | ... | 0.46 | ... |
| 10—14 | ... | 79.755 | ... | 1880 | ... | 5 | ... | 0.36 | ... |
| 15—19 | ... | 91.716 | ... | 1587 | ... | 10 | ... | 0.63 | ... |
| 20—24 | ... | 135.989 | ... | 2353 | ... | 8 | ... | 0.34 | ... |
| 25—29 | ... | 119.539 | ... | 2068 | ... | 8 | ... | 0.38 | ... |
| 30—34 | ... | 99.941 | ... | 1729 | ... | 9 | ... | 0.52 | ... |
| 35—39 | ... | 72.306 | ... | 1251 | ... | 8 | ... | 0.64 | ... |
| 40—44 | ... | 52.732 | ... | 912 | ... | 13 | ... | 1.42 | ... |
| 45—49 | ... | 31.982 | ... | 553 | ... | 9 | ... | 1.62 | ... |
| 50—54 | ... | 20.185 | ... | 349 | ... | 7 | ... | 2.00 | ... |
| 55—59 | ... | 7.402 | ... | 128 | ... | 4 | ... | 3.12 | ... |
| 60—64 | ... | 9.164 | ... | 159 | ... | 7 | ... | 4.40 | ... |
| 65—69 | ... | 4.935 | ... | 85 | ... | 5 | ... | 5.58 | ... |
| 70—74 | ... | 3.313 | ... | 57 | ... | 2 | ... | 3.51 | ... |
| 75—79 | ... | 1.504 | ... | 26 | ... | 1 | ... | 3.84 | ... |
| 80—84 | ... | 1.363 | ... | 23 | ... | 3 | ... | 13.04 | ... |
| 85—89 | ... | 0.258 | ... | 5 | ... | 1 | ... | 20.00 | ... |
| 90—94 | ... | 0.188 | ... | 3 | ... | 2 | ... | 66.66 | ... |
| 95—99 | ... | 0.164 | ... | 3 | ... | — | ... | 100.00 | ... |
| 100 | ... | 0.005 | ... | 1 | ... | 1 | ... | — | ... |
| | 1000.000 | ... | 17,300 | ... | 285 | ... | 1.64 | ... | 999.969 |

NATIVE.

| POPULATION. | | | DEATHS. | | | |
|-------------|-------------------------|-----------------------|---------|-----------------|---------------|-----------------------|
| Age group. | Estimated distribution. | Estimated population. | Number. | % of age group. | Distribution. | |
| 0—1 | ... | Not known | ... | 209 | ... | Not known ... 293.122 |
| 2—4 | ... | „ | ... | 35 | ... | „ ... 49.087 |
| 5—9 | ... | „ | ... | 25 | ... | „ ... 35.062 |
| 10—14 | ... | „ | ... | 19 | ... | „ ... 26.647 |
| 15—19 | ... | „ | ... | 19 | ... | „ ... 26.647 |
| 20—24 | ... | „ | ... | 21 | ... | „ ... 29.452 |
| 25—29* | ... | „ | ... | 252 | ... | „ ... 353.430 |
| 30—34* | ... | „ | ... | 69 | ... | „ ... 96.772 |
| 35—39 | ... | „ | ... | 25 | ... | „ ... 35.062 |
| 40—44 | ... | „ | ... | 10 | ... | „ ... 14.025 |
| 45—49 | ... | „ | ... | 9 | ... | „ ... 12.622 |
| 50—54 | ... | „ | ... | 11 | ... | „ ... 15.427 |
| 55—59 | ... | „ | ... | — | ... | „ ... — |
| 60—64 | ... | „ | ... | 6 | ... | „ ... 8.415 |
| 65—69 | ... | „ | ... | — | ... | „ ... — |
| 70—74 | ... | „ | ... | — | ... | „ ... — |
| 75—79 | ... | „ | ... | — | ... | „ ... — |
| 80—84 | ... | „ | ... | 3 | ... | „ ... 4.277 |
| 85—89 | ... | „ | ... | — | ... | „ ... — |
| 90—94 | ... | „ | ... | — | ... | „ ... — |
| 95—99 | ... | „ | ... | — | ... | „ ... — |
| 38,000 | | | ... | 713 | ... | „ ... 999.977 |

* 127 Native deaths recorded as “adults” have been included in the groups 25—34.

The age group distribution for Nairobi has been taken in the same proportion as the age group distribution for the whole Colony, as published in the report on non-native census taken in 1931.

CAUSES OF DEATHS.

| International cause of death. | White. | Indian. | Goan. | Native. | Somali. | Arab. | Nubian. | Seychellois. | Cingalese. | Total. |
|-------------------------------|--------|---------|-------|---------|---------|-------|---------|--------------|------------|--------|
| GROUP I. GENERAL DISEASES. | | | | | | | | | | |
| 1. Typhoid fever | ... | ... | 1 | 3 | 1 | 4 | — | — | — | 9 |
| 5. Malaria | ... | ... | — | 6 | — | 32 | — | — | — | 38 |
| 7. Measles | ... | ... | — | 3 | — | 2 | — | — | — | 5 |
| 9. Whooping cough | ... | ... | — | — | — | 1 | — | — | — | 1 |
| 10. Diphtheria | ... | ... | — | 4 | — | — | — | — | — | 4 |
| 11. Influenza | ... | ... | 2 | — | — | 1 | — | — | — | 3 |
| 16. Dysentery | ... | ... | — | 2 | — | 12 | 2 | — | — | 16 |
| 17. Plague | ... | ... | — | 5 | — | 17 | — | — | — | 22 |
| 20. Leprosy | ... | ... | — | — | — | 1 | — | — | — | 1 |
| 21. Erysipelas | ... | ... | — | 1 | — | — | — | — | — | 1 |
| 24. Cerebrospinal meningitis | ... | ... | — | 3 | — | 15 | — | — | — | 18 |
| 25. Blackwater fever | ... | ... | — | 2 | — | — | — | — | — | 2 |
| 29. Tetanus | ... | ... | — | 1 | — | 2 | — | — | — | 3 |
| 31. Pulmonary tuberculosis | ... | ... | 1 | — | 1 | 20 | — | — | — | 22 |
| 32. Tubercular meningitis | ... | ... | — | — | — | 3 | — | — | — | 3 |
| 33. Tubercular peritonitis | ... | ... | — | — | — | 1 | — | — | — | 1 |
| 37. Disseminated tuberculosis | ... | ... | — | — | — | 4 | — | — | — | 4 |
| 38. Syphilis | ... | ... | — | — | — | 15 | — | — | — | 15 |
| 41. Septicaemia | ... | ... | — | 2 | 1 | 13 | — | — | — | 16 |

CAUSES OF DEATHS (Continued).

| International cause of death. | White. | Indian. | Goan. | Native. | Somali. | Arab. | Nubian. | Seychellois. | Singalese. | Total. |
|---|--------|---------|-------|---------|---------|-------|---------|--------------|------------|--------|
| GROUP II. GENERAL DISEASES (not included above). | | | | | | | | | | |
| 44. Cancer liver | 1 | 1 | — | 3 | — | — | — | — | — | 5 |
| 45. Cancer intestines | 1 | — | — | 1 | — | — | — | — | — | 2 |
| 46. Cancer uterus | 1 | — | — | — | — | — | — | — | — | 1 |
| 47. Cancer breast | 1 | — | — | — | — | — | — | — | — | 1 |
| 49. Sarcoma (undifferentiated) | — | 1 | — | — | — | — | — | — | — | 1 |
| Sarcoma testes | — | 1 | — | — | — | — | — | — | — | 1 |
| Carcinoma prostrate | — | 1 | — | — | — | — | — | — | — | 1 |
| Carcinoma throat | — | — | — | 1 | — | — | — | — | — | 1 |
| 51. Rheumatic fever | — | 3 | — | — | — | — | — | — | — | 3 |
| 52. Chronic rheumatism | — | — | — | 1 | — | — | — | — | — | 1 |
| 53. Scurvy | — | — | — | 1 | — | — | — | — | — | 1 |
| Kikuyu disease | — | — | — | 4 | — | — | — | — | — | 4 |
| 56. Rickets | — | 8 | 1 | — | — | — | — | — | — | 9 |
| 57. Diabetes | — | 7 | 1 | — | — | — | — | — | — | 8 |
| 58. Anaemia | — | 2 | — | — | — | — | — | — | — | 2 |
| 60. Cretinism | — | 1 | — | — | — | — | — | — | — | 1 |
| 64. Ruptured spleen | — | 1 | — | — | — | — | — | — | — | 1 |
| 65. Leukaemia | — | 3 | — | — | — | — | — | — | — | 3 |
| 66. Alcoholism | — | — | — | 2 | — | — | — | — | — | 2 |
| 69. Purpura | — | — | — | 1 | — | — | — | — | — | 1 |
| GROUP III. DISEASES OF NERVOUS SYSTEM. | | | | | | | | | | |
| 70. Abscess brain | — | 1 | — | — | — | — | — | — | — | 1 |
| 71. Meningitis | — | 3 | — | 7 | — | — | — | — | — | 10 |
| 73. Myelitis | — | 1 | — | — | — | — | — | — | — | 1 |
| 74. Cerebral haemorrhage | 4 | 2 | — | 8 | 2 | — | — | — | — | 16 |
| 78. Epilepsy | — | — | — | 1 | — | — | — | — | — | 1 |
| 80. Convulsions (under 5) | — | 2 | — | 6 | — | — | — | — | — | 8 |
| 84. Cerebral tumour | 1 | — | — | — | — | — | — | — | — | 1 |
| 86. Mastoid disease | — | 1 | — | — | — | — | — | — | — | 1 |
| GROUP IV. DISEASES OF THE CIRCULATORY SYSTEM. | | | | | | | | | | |
| 87. Pericarditis | — | — | — | 1 | — | — | — | — | — | 1 |
| 88. Endocarditis | 1 | 1 | — | — | — | — | — | — | — | 2 |
| 90. Diseases of the heart | 3 | 4 | — | 11 | — | — | 1 | — | — | 19 |
| GROUP V. DISEASES OF THE RESPIRATORY SYSTEM. | | | | | | | | | | |
| 98. Oedema larynx | — | — | — | 4 | — | — | — | — | — | 4 |
| 99. Bronchitis | 3 | 4 | — | 1 | — | — | — | — | — | 8 |
| 100. Broncho-pneumonia | 1 | 39 | 2 | 89 | 3 | 1 | — | — | 1 | 136 |
| 101. Pneumonia | 1 | 34 | 4 | 254 | 6 | 2 | — | — | — | 301 |
| 102. Pleurisy | — | 2 | — | — | — | — | — | — | — | 2 |
| Empyema | 1 | — | — | — | — | — | — | — | — | 1 |
| 103. Pulmonary oedema | — | 1 | — | — | — | — | — | — | — | 1 |
| 105. Asthma | — | 1 | — | 1 | — | — | — | — | — | 2 |
| 107. Abscess of lung | 1 | — | — | 1 | — | — | — | — | — | 2 |
| GROUP VI. DISEASES OF THE DIGESTIVE SYSTEM. | | | | | | | | | | |
| 111. Ulcer of stomach, duodenum | 1 | — | — | 1 | — | — | — | — | — | 2 |
| 113. Diarrhoea (under 2) | — | 22 | 3 | 29 | 1 | 1 | — | 1 | — | 57 |
| 114. Diarrhoea (over 2) | — | — | — | 11 | — | — | — | — | — | 11 |
| 117. Appendicitis | — | — | 1 | — | — | — | — | — | — | 1 |
| 118. Intestinal obstruction | — | 3 | — | 5 | — | — | — | — | — | 8 |
| 120. Yellow atrophy liver | — | 1 | — | — | — | — | — | — | — | 1 |
| 126. Peritonitis | — | 1 | — | 1 | — | — | — | — | — | 2 |
| GROUP VII. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA. | | | | | | | | | | |
| 128. Acute nephritis | — | 2 | — | — | — | — | — | — | — | 2 |
| 129. Chronic nephritis | 2 | 1 | 1 | 5 | — | — | — | — | — | 9 |
| 131. Pyelitis | 1 | — | — | — | — | — | — | — | — | 1 |
| Pyelonephritis | 1 | 1 | — | — | — | — | — | — | — | 2 |
| 135. Disease of prostate | — | 1 | — | — | — | — | — | — | — | 1 |
| 141. Septic metritis | — | 1 | — | — | — | — | — | — | — | 1 |

CAUSES OF DEATHS (Continued).

| International cause of death. | White. | Indian. | Goan. | Native. | Somali. | Arab. | Nubian. | Seychellois. | Singalese. | Total. |
|---|--------|---------|-------|---------|---------|-------|---------|--------------|------------|--------|
| GROUP VIII. THE PUERPERAL STATE. | | | | | | | | | | |
| 144. Postpartum haemorrhage | — | — | — | 2 | — | — | — | — | — | 2 |
| 145. Childbirth | — | 1 | — | 4 | — | — | — | — | — | 5 |
| 146. Puerperal sepsis | — | 5 | — | 1 | — | — | — | — | — | 6 |
| 148. Eclampsia | — | 1 | — | — | — | — | — | — | — | 1 |
| GROUP IX. DISEASES OF THE SKIN. | | | | | | | | | | |
| 151. Gangrene jaw | — | 1 | 1 | — | — | — | — | — | — | 2 |
| 153. Cellulitis | — | — | — | 1 | — | — | — | — | — | 1 |
| GROUP X. DISEASES OF THE BONES. | | | | | | | | | | |
| 156. Arthritis | — | — | — | 1 | 1 | — | — | — | — | 2 |
| GROUP XI. CONGENITAL MALFORMATION. | | | | | | | | | | |
| 159. Anencephaly | 1 | — | — | — | — | — | — | — | — | 1 |
| Congenital heart disease | 1 | 2 | — | — | — | — | — | — | — | 3 |
| Cleft palate | — | 1 | — | — | — | — | — | — | — | 1 |
| Monstrosity | — | — | — | 1 | — | — | — | — | — | 1 |
| Pyloric stenosis | — | 1 | — | — | — | — | — | — | — | 1 |
| Spina bifida | — | — | — | 1 | — | — | — | — | — | 1 |
| GROUP XII. DISEASES OF EARLY INFANCY. | | | | | | | | | | |
| 160. Congenital debility | 2 | 13 | 1 | 21 | — | — | — | — | — | 37 |
| 161. Premature birth | 3 | 14 | 1 | 12 | — | — | — | 1 | — | 31 |
| Icterus neonatorum | — | 1 | — | — | — | — | — | — | — | 1 |
| 162. Peritonitis | — | 2 | — | — | — | — | — | — | — | 2 |
| Asphyxia neonatorum | — | 3 | — | — | — | — | — | — | — | 3 |
| Omphalitis | — | 1 | — | — | — | — | — | — | — | 1 |
| Haematemesis | — | 1 | — | — | — | — | — | — | — | 1 |
| Atelectasis | — | — | — | — | — | — | — | 1 | — | 1 |
| GROUP XIII. OLD AGE. | | | | | | | | | | |
| 164. Old age | 2 | 4 | — | 4 | — | — | — | — | — | 10 |
| GROUP XIV. EXTERNAL CAUSES. | | | | | | | | | | |
| 168. Suicide by hanging | — | — | — | 3 | — | — | — | — | — | 3 |
| 170. Suicide by firearms | 3 | — | — | — | — | — | — | — | — | 3 |
| 179. Accidental burns | — | 7 | — | 3 | — | — | — | — | — | 10 |
| 182. Accidental drowning | — | 1 | — | 2 | — | — | — | — | — | 3 |
| 185. Accidental fall | — | — | — | 1 | — | — | — | — | — | 1 |
| 188. Road accident | — | 5 | — | 8 | — | — | — | — | — | 13 |
| 198. Homicide by cutting instrument | — | — | — | 2 | — | — | — | — | — | 2 |
| 199. Homicide | — | — | — | 1 | — | — | — | — | — | 1 |
| 201. Fracture | — | — | — | 2 | — | — | — | — | — | 2 |
| 202. Judicial hanging | — | — | — | 7 | — | — | — | — | — | 7 |
| Foreign body in oesophagus | — | — | — | 1 | — | — | — | — | — | 1 |
| GROUP XV. ILL-DEFINED CAUSES. | | | | | | | | | | |
| 205. Heart failure | 1 | 7 | — | — | — | — | — | — | — | 8 |
| Debility | — | 1 | — | — | — | — | — | — | — | 1 |
| P.U.O. | — | 3 | — | 2 | — | — | — | — | — | 5 |
| Natural causes | — | 1 | — | 4 | — | — | — | — | — | 5 |
| Collapse | — | — | — | 1 | — | — | — | — | — | 1 |
| Anaesthetic | — | — | — | 1 | — | — | — | — | — | 1 |
| Shock | — | — | — | 1 | — | — | — | — | — | 1 |
| Unknown | — | — | — | 9 | — | — | — | — | — | 9 |
| TOTAL | 42 | 266 | 19 | 689 | 15 | 4 | 1 | 3 | 1 | 1040 |

9. INFANT MORTALITY.

The total number of deaths in infants under one year of age during 1937 was 290 or 27.8% of the total deaths, compared with 294 and 36.9% during the previous year.

Reference to the age distribution table in the previous section shows among Europeans, out of every 1,000 deaths, 166 were of the 0—1 age group and that during 1937, 3.08% of that age group died.

Similarly among Asians, out of every 1,000 deaths, 533 were of the 0—1 age group and that, during 1937, 14.10% of that age group died.

Not knowing the age group distribution for Natives, all we are able to state is that out of every 1,000 deaths, 293 were of the 0—1 age group.

The death distribution for this age group among Asians and Natives shows a slight improvement over the figures for 1936, which were 540 and 308 respectively.

In previous years infant mortality has been expressed as a percentage of infant deaths to total deaths and the practice will be continued for comparative purposes.

INFANT DEATHS.

| Race. | | | | Infant deaths. | | Total deaths. | | Percentage of total deaths. | |
|------------------|-----|-----|-----|----------------|-----|---------------|-----|-----------------------------|--|
| White | ... | ... | ... | 7 | ... | 42 | ... | 16.66 | |
| Asiatic | ... | ... | ... | 134 | ... | 285 | ... | 47.01 | |
| Native and other | ... | ... | ... | 149 | ... | 713 | ... | 20.89 | |
| ALL RACES | | | | 290 | ... | 1040 | ... | 27.88 | |

INFANT DEATHS FOR TEN YEARS.

| Race. | Percentage of total deaths. | | | | | | | | | | Average | |
|-----------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|------|
| | 1928. | 1929. | 1930. | 1931. | 1932. | 1933. | 1934. | 1935. | 1936. | 1937. | 10 years. | |
| White | ... | 8.3 | 23.7 | 13.2 | 12.0 | 9.6 | 5.4 | 17.3 | 8.8 | 8.0 | 16.66 | 12.2 |
| Asiatic | ... | 34.5 | 44.9 | 42.7 | 44.6 | 45.8 | 52.2 | 42.1 | 50.9 | 54.0 | 47.01 | 45.8 |
| Native | ... | 13.1 | 15.4 | 10.6 | 20.6 | 17.3 | 21.2 | 19.2 | 24.1 | 30.8 | 20.89 | 19.3 |
| ALL RACES | | 20.6 | 24.3 | 20.6 | 29.5 | 28.0 | 30.7 | 26.5 | 31.1 | 36.9 | 27.88 | 27.6 |

It will be noted that the percentages of infant deaths to total deaths during 1937 were less, with the exception of the European rate, than those for 1936, but in each case they were above the average for 10 years.

The true infant mortality, that is the rate of infant deaths per thousand live births, is set out in the table hereunder.

INFANT MORTALITY RATES.

| Race. | | | | Live births. | | Deaths. | | Per 1,000 live births. |
|---------|-----|-----|-----|--------------|-----|---------|-----|---------------------------|
| White | ... | ... | ... | 64 | ... | 7 | ... | 109.3 |
| Asiatic | ... | ... | ... | 432 | ... | 134 | ... | 310.1 |
| Native | ... | ... | ... | 440 | ... | 149 | ... | 338.6 |
| TOTAL | | | | 936 | ... | 290 | ... | 309.8 |

It is noted that the Asian and Native rates compare favourably with the figures for 1936, which were 518 and 448 respectively.

In the report for last year, attention was drawn to the very high infant mortality rate for non-Europeans, namely, 479. During 1937, the rate, although still high, namely 324, compares very favourably with 1936.

As it is of practical interest to know at what ages these infant deaths occurred, the three tables following are appended:—

DEATHS AT ONE MONTH OR UNDER.

| Race. | | | | 1 | WEEKS. | | | 4 | One month or under. |
|----------|------------------------|-----|-----|-----|--------|-----|---|-----|------------------------|
| WHITE. | Deaths | ... | ... | 4 | — | — | — | 1 | 5 |
| | Percentage live births | ... | ... | 6.2 | — | — | — | 1.5 | 7.8 |
| ASIATIC. | Deaths | ... | ... | 20 | 6 | 7 | — | 6 | 39 |
| | Percentage live births | ... | ... | 4.6 | 1.3 | 1.6 | — | 1.3 | 9.0 |
| NATIVE. | Deaths | ... | ... | 19 | 5 | 5 | — | 5 | 34 |
| | Percentage live births | ... | ... | 4.3 | 1.1 | 1.1 | — | 1.1 | 7.7 |
| TOTAL. | Deaths | ... | ... | 43 | 11 | 12 | — | 12 | 78 |
| | Percentage live births | ... | ... | 4.5 | 1.1 | 1.2 | — | 1.2 | 8.3 |

DEATHS TO SIX MONTHS.

| Race. | | | | 1 | 2 | 3 | 4 | 5 | 6 | 6 months or under. |
|----------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------|
| WHITE. | Deaths | ... | ... | 5 | — | 1 | — | — | — | 6 |
| | % live births | ... | ... | 7.8 | — | 1.5 | — | — | — | 9.3 |
| ASIATIC. | Deaths | ... | ... | 39 | 19 | 13 | 7 | 9 | 6 | 93 |
| | % live births | ... | ... | 9.0 | 4.3 | 3.0 | 1.6 | 2.0 | 1.3 | 21.5 |
| NATIVE. | Deaths | ... | ... | 34 | 16 | 11 | 8 | 6 | 10 | 85 |
| | % live births | ... | ... | 7.7 | 3.6 | 2.4 | 1.8 | 1.3 | 2.2 | 19.3 |
| TOTAL. | Deaths | ... | ... | 78 | 35 | 25 | 15 | 15 | 16 | 184 |
| | % live births | ... | ... | 8.3 | 3.7 | 2.6 | 1.6 | 1.6 | 1.6 | 19.6 |

DEATHS FROM SEVEN MONTHS TO UNDER TWELVE MONTHS.

| Race. | | | | 7 | 8 | 9 | 10 | 11 | 12 | 7 months to 1 year. |
|----------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|
| WHITE. | Deaths | ... | ... | — | — | — | 1 | — | — | 1 |
| | % live births | ... | ... | — | — | — | 1.5 | — | — | 1.5 |
| ASIATIC. | Deaths | ... | ... | 11 | 5 | 9 | 9 | 4 | 3 | 41 |
| | % live births | ... | ... | 2.5 | 1.1 | 2.0 | 2.0 | 0.9 | 0.6 | 9.4 |
| NATIVE. | Deaths | ... | ... | 17 | 8 | 15 | 10 | 11 | 3 | 64 |
| | % live births | ... | ... | 3.8 | 1.8 | 3.4 | 2.2 | 2.4 | 0.6 | 14.5 |
| TOTAL. | Deaths | ... | ... | 28 | 13 | 24 | 20 | 15 | 6 | 106 |
| | % live births | ... | ... | 2.9 | 1.3 | 2.4 | 2.1 | 1.6 | 0.6 | 11.3 |

The causes of infant mortality and the seasonal incidence are indicated in the following tables:—

INFANT MORTALITY.

| | | | | White. | Indian. | Goan. | Native. | Somali. | Arab. | Seych. | Total. |
|--------------------------|-----|-----|-----|--------|---------|-------|---------|---------|-------|--------|--------|
| Anencephalus | ... | ... | ... | 1 | — | — | — | — | — | — | 1 |
| Asphyxia neonatorum | ... | ... | ... | — | 3 | — | — | — | — | — | 3 |
| Atelectasis | ... | ... | ... | — | — | — | — | — | — | 1 | 1 |
| Bronchitis | ... | ... | ... | — | 3 | — | — | — | — | — | 3 |
| Broncho-pneumonia | ... | ... | ... | — | 29 | 1 | 42 | 2 | 1 | 1 | 76 |
| Burns | ... | ... | ... | — | — | — | 1 | — | — | — | 1 |
| Cellulitis | ... | ... | ... | — | — | — | 1 | — | — | — | 1 |
| Cerebrospinal meningitis | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Cleft palate | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Congenital heart disease | ... | ... | ... | — | 2 | — | — | — | — | — | 2 |
| Convulsions | ... | ... | ... | — | 1 | — | 4 | — | — | — | 5 |
| Diarrhoea | ... | ... | ... | — | 22 | 2 | 21 | 1 | 1 | 1 | 48 |
| Diphtheria | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Dysentery | ... | ... | ... | — | 2 | — | 1 | — | — | — | 3 |
| Erysipelas | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Haematemesis | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Icterus neonatorum | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Ill defined | ... | ... | ... | — | 2 | — | 4 | — | — | — | 6 |
| Influenza | ... | ... | ... | — | — | — | 1 | — | — | — | 1 |
| Intussusception | ... | ... | ... | — | 2 | — | — | — | — | — | 2 |
| Malaria | ... | ... | ... | — | — | — | 6 | — | — | — | 6 |
| Malformation of heart | ... | ... | ... | 1 | — | — | — | — | — | — | 1 |
| Marasmus | ... | ... | ... | 2 | 13 | 1 | 11 | — | — | — | 27 |
| Measles | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Monstrosity | ... | ... | ... | — | — | — | 1 | — | — | — | 1 |
| Omphalitis | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Peritonitis | ... | ... | ... | — | 3 | — | — | — | — | — | 3 |
| Pneumonia | ... | ... | ... | — | 13 | 2 | 26 | 1 | — | — | 42 |
| Prematurity | ... | ... | ... | 3 | 14 | 1 | 11 | — | — | 1 | 30 |
| Pyelonephritis | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Pyloric stenosis | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Rheumatism | ... | ... | ... | — | 1 | — | — | — | — | — | 1 |
| Rickets | ... | ... | ... | — | 7 | — | — | — | — | — | 7 |
| Spina bifida | ... | ... | ... | — | — | — | 1 | — | — | — | 1 |
| Syphilis | ... | ... | ... | — | — | — | 7 | — | — | — | 7 |
| Tetanus | ... | ... | ... | — | — | — | 1 | — | — | — | 1 |
| TOTAL | ... | ... | ... | 7 | 127 | 7 | 139 | 4 | 2 | 4 | 290 |

SEASONAL INFANT MORTALITY.

| | | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | TOTAL |
|--------------------------|-----|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-------|
| Anencephalus | ... | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 |
| Asphyxia neonatorum | ... | — | — | 1 | — | — | 1 | — | — | 1 | — | — | — | 3 |
| Atelectasis | ... | — | — | — | 1 | — | — | — | — | — | — | — | — | 1 |
| Bronchitis | ... | — | — | — | — | 1 | 2 | — | — | — | — | — | — | 3 |
| Broncho-pneumonia | ... | 6 | 4 | 2 | 5 | 9 | 18 | 8 | 6 | 4 | 7 | 5 | 2 | 76 |
| Burns | ... | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 |
| Cellulitis | ... | 1 | — | — | — | — | — | — | — | — | — | — | — | 1 |
| Cerebrospinal meningitis | ... | — | — | — | — | — | — | — | — | 1 | — | — | — | 1 |
| Cleft palate | ... | — | — | — | — | — | 1 | — | — | — | — | — | — | 1 |
| Congenital heart disease | ... | — | — | 1 | — | — | 1 | — | — | — | — | — | — | 2 |
| Convulsions | ... | — | — | — | 1 | 1 | — | 1 | — | — | — | 1 | 1 | 5 |
| Diarrhoea | ... | 1 | 2 | 8 | 14 | 9 | 3 | 3 | — | — | 1 | 6 | 1 | 48 |
| Diphtheria | ... | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 |
| Dysentery | ... | — | — | 1 | — | — | — | 1 | — | — | — | 1 | — | 3 |
| Erysipelas | ... | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 |
| Haematemesis | ... | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 |
| Icterus neonatorum | ... | — | — | — | — | — | — | — | 1 | — | — | — | — | 1 |
| Ill defined | ... | 1 | — | — | 1 | 2 | 1 | — | — | — | — | — | 1 | 6 |
| Influenza | ... | — | — | — | — | — | — | — | 1 | — | — | — | — | 1 |
| Intussusception | ... | 1 | — | — | — | — | — | — | — | — | 1 | — | — | 2 |
| Malaria | ... | — | 1 | 1 | — | — | — | 1 | 1 | — | 1 | 1 | — | 6 |
| Malformation of heart | ... | — | — | — | — | — | — | — | — | — | 1 | — | — | 1 |
| Marasmus | ... | 1 | 2 | 1 | 1 | 2 | 4 | 3 | 2 | 1 | 4 | 4 | 2 | 27 |
| Measles | ... | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 |
| Monstrosity | ... | — | — | — | — | — | — | — | — | — | 1 | — | — | 1 |
| Omphalitis | ... | — | — | — | — | — | 1 | — | — | — | — | — | — | 1 |
| Peritonitis | ... | 1 | — | 1 | — | — | 1 | — | — | — | — | — | — | 3 |
| Pneumonia | ... | — | 7 | 2 | 6 | 2 | 4 | 6 | 3 | 3 | 1 | 4 | 4 | 42 |
| Prematurity | ... | 1 | 1 | 3 | 3 | 2 | 6 | 2 | 4 | 3 | 4 | — | 1 | 30 |
| Pyelonephritis | ... | — | — | — | — | — | — | — | — | — | — | 1 | — | 1 |
| Pyloric stenosis | ... | — | — | — | — | — | — | — | — | — | — | 1 | — | 1 |
| Rheumatism | ... | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 |
| Rickets | ... | 1 | — | — | 3 | 1 | — | — | — | 1 | — | 1 | — | 7 |
| Spina bifida | ... | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 |
| Syphilis | ... | — | 1 | 1 | 1 | 1 | 1 | — | — | — | — | 2 | — | 7 |
| Tetanus | ... | — | — | — | — | — | — | — | — | — | 1 | — | — | 1 |
| TOTAL | ... | 15 | 18 | 24 | 36 | 33 | 44 | 25 | 18 | 14 | 22 | 27 | 14 | 290 |

SEASONAL INFANT MORTALITY FOR THE RACES.

| | White. | Indian. | Goan. | Native. | Somali. | Arab. | Seych. | Cingalese. | Total. |
|-----------|--------|---------|-------|---------|---------|-------|--------|------------|--------|
| January | 1 | 9 | — | 5 | — | — | — | — | 15 |
| February | — | 2 | 1 | 13 | 1 | 1 | — | — | 18 |
| March | 2 | 12 | — | 9 | — | — | 1 | — | 24 |
| April | — | 13 | — | 22 | — | — | 1 | — | 36 |
| May | — | 18 | 2 | 13 | — | — | — | — | 33 |
| June | 1 | 26 | 1 | 15 | 1 | — | — | — | 44 |
| July | — | 6 | 2 | 16 | — | — | — | 1 | 25 |
| August | 1 | 7 | 1 | 8 | — | 1 | — | — | 18 |
| September | 1 | 7 | — | 6 | — | — | — | — | 14 |
| October | 1 | 11 | — | 10 | — | — | — | — | 22 |
| November | — | 9 | — | 17 | 1 | — | — | — | 27 |
| December | — | 7 | — | 5 | 1 | — | 1 | — | 14 |
| | 7 | 127 | 7 | 139 | 4 | 2 | 3 | 1 | 290 |

COMPARISON OF THE PERCENTAGE OF THE FOUR PRINCIPAL CAUSES OF
INFANTILE MORTALITY TO TOTAL INFANT DEATHS FOR TEN YEARS.

| | | Percentage to total of Infant Deaths. | | | | | | | | | | Average |
|---------------------|--------|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| | | 1928. | 1929. | 1930. | 1931. | 1932. | 1933. | 1934. | 1935. | 1936. | 1937. | 10 yrs. |
| Pneumonia | ... .. | 32.6 | 32.0 | 44.6 | 41.7 | 36.1 | 41.1 | 37.4 | 44.7 | 44.9 | 40.7 | 39.5 |
| Congenital debility | ... .. | 10.6 | 11.9 | 10.0 | 15.9 | 12.9 | 14.4 | 9.6 | 8.3 | 9.8 | 9.3 | 11.2 |
| Prematurity | ... .. | 11.3 | 13.2 | 15.0 | 7.7 | 17.0 | 8.3 | 12.8 | 15.6 | 9.8 | 10.3 | 12.1 |
| Diarrhoea | ... .. | 7.8 | 9.4 | 6.9 | 8.7 | 9.5 | 8.8 | 9.0 | 6.9 | 6.8 | 16.5 | 8.0 |

It is noted that pneumonia still holds the position as principal cause of infant deaths during 1937. The condition accounted for 40.7% of the total deaths, being less than in the previous year, although slightly above the average for 10 years.

Prematurity accounted for 10.3% of the total deaths, being somewhat greater than the figure for 1936 but less than the 10 years' average.

Congenital debility held the lowest position of the four principal causes with 9.3%, being about the same as the previous year but less than the average for 10 years.

The proportion of deaths from diarrhoea will be noticed to be higher than both the previous year and the 10 years' average.

10. NOTIFIABLE INFECTIOUS DISEASES.

No alteration to the list of notifiable diseases has been made since Malaria was added in 1930.

The number of cases of infectious diseases notified during 1937 totalled 1,121 compared with 927 for 1936, the difference being mainly due to an increase of malaria cases.

Excluding the 942 malaria cases, the total of 179 may be compared with the totals for the previous five years of 176, 149, 130, 125, and 128 respectively.

The number of cases of locally acquired malaria notified totalled 942 compared with 751 during 1936 and 3,500 during 1935.

Blackwater fever was notified in an equal number of instances as last year, namely 2.

There was a slight increase in the cases of cerebrospinal meningitis reported from 21 to 24.

Diphtheria accounted for 11 notifications compared with 7 during 1936.

Twenty-five cases of human plague were recorded from within the Municipality during the year.

The number of notifications of puerperal sepsis during 1937 increased from 4 to 15 compared with the previous year.

Relapsing fever accounted for 10 notifications, the largest number since 1926.

Tuberculosis was notified in 42 instances, of which 32 were pulmonary cases and 10 cases other than pulmonary.

Typhoid fever showed a slight increase in numbers reported from 37 in 1936 to 42 in 1937.

There were no notifications during the year in connection with leprosy, ophthalmia neonatorum, Malta fever, beri beri, smallpox, trypanosomiasis, poliomyelitis, encephalitis lethargica, glanders, rabies, and cholera.

INFECTIOUS DISEASES NOTIFIED.

| | White. | Indian. | Goan. | Native. | Chinese. | TOTAL. |
|--------------------------|--------|---------|-------|---------|----------|--------|
| Malaria | 35 | 540 | — | 367 | — | 942 |
| Anthrax | — | — | — | 2 | — | 2 |
| Blackwater fever ... | — | 2 | — | — | — | 2 |
| Cerebrospinal meningitis | 1 | 4 | — | 19 | — | 24 |
| Diphtheria | 2 | 9 | — | — | — | 11 |
| Erysipelas | — | 2 | — | — | — | 2 |
| Plague | — | 5 | — | 20 | — | 25 |
| Puerperal sepsis | — | 15 | — | — | — | 15 |
| Relapsing fever | — | 1 | — | 9 | — | 10 |
| Scarlet fever | 2 | — | — | — | — | 2 |
| Tick typhus | 2 | — | — | — | — | 2 |
| Tuberculosis, pulmonary | — | 7 | — | 24 | 1 | 32 |
| „ meningitis | — | — | — | 3 | — | 3 |
| „ abdomen | — | — | — | 1 | — | 1 |
| „ spine | — | — | — | 1 | — | 1 |
| „ adenitis | — | — | — | 1 | — | 1 |
| „ disseminated | — | — | — | 4 | — | 4 |
| Typhoid fever | 1 | 21 | 2 | 18 | — | 42 |
| TOTAL | 43 | 606 | 2 | 469 | 1 | 1121 |

SEASONAL INCIDENCE OF INFECTIOUS DISEASES NOTIFIED.

| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | TOTAL. |
|--------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|
| Malaria | 28 | 12 | 26 | 35 | 55 | 87 | 219 | 237 | 128 | 44 | 28 | 43 | 942 |
| Anthrax | — | — | — | — | — | 1 | 1 | — | — | — | — | — | 2 |
| Blackwater fever ... | — | — | — | — | — | — | — | 1 | 1 | — | — | — | 2 |
| Cerebrospinal meningitis | 1 | — | 4 | 4 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 4 | 24 |
| Diphtheria | — | — | 1 | 3 | 2 | 1 | 1 | — | 1 | 1 | — | 1 | 11 |
| Erysipelas | — | — | 1 | — | — | — | — | — | — | — | 1 | — | 2 |
| Plague | — | — | — | 2 | — | 10 | 1 | 1 | 4 | 4 | 3 | — | 25 |
| Puerperal sepsis | 3 | — | 1 | 2 | — | 2 | — | 1 | 1 | 1 | 3 | 1 | 15 |
| Relapsing fever | — | — | — | 2 | 1 | 1 | — | — | — | 3 | 2 | 1 | 10 |
| Scarlet fever | — | — | — | 1 | 1 | — | — | — | — | — | — | — | 2 |
| Tick typhus | — | — | — | — | — | — | — | — | — | — | — | 2 | 2 |
| Tuberculosis, pulmonary | 1 | 1 | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 5 | 5 | 3 | 32 |
| „ meningitis | — | 1 | — | — | — | — | 1 | — | 1 | — | — | — | 3 |
| „ abdomen | — | — | — | — | — | — | 1 | — | — | — | — | — | 1 |
| „ spine | — | — | — | — | — | 1 | — | — | — | — | — | — | 1 |
| „ adenitis | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 |
| „ disseminated | 1 | — | 1 | — | — | — | — | 1 | 1 | — | — | — | 4 |
| Typhoid fever | 2 | 2 | 4 | 3 | 2 | 5 | 4 | — | 5 | 3 | 4 | 8 | 42 |
| TOTAL | 36 | 16 | 40 | 55 | 67 | 111 | 231 | 245 | 146 | 62 | 48 | 64 | 1121 |

INCIDENCE AND DEATH RATES FOR NOTIFIABLE INFECTIOUS DISEASES.

| | No. of cases. | No. of deaths. | Incidence per 1,000 population. | Deaths. per 1,000 population. |
|--------------------------|---------------|----------------|---------------------------------|-------------------------------|
| Malaria | 942 | 38 | 15.364 | 0.619 |
| Anthrax | 2 | — | 0.032 | — |
| Blackwater fever ... | 2 | 2 | 0.032 | 0.032 |
| Cerebrospinal meningitis | 24 | 18 | 0.391 | 0.293 |
| Diphtheria | 11 | 4 | 0.179 | 0.065 |
| Erysipelas | 2 | 1 | 0.032 | 0.016 |
| Plague | 25 | 22 | 0.407 | 0.358 |
| Puerperal sepsis | 15 | 6 | 0.244 | 0.097 |
| Relapsing fever | 10 | — | 0.163 | — |
| Scarlet fever | 2 | — | 0.032 | — |
| Tick typhus | 2 | — | 0.032 | — |
| Tuberculosis | 42 | 30 | 0.685 | 0.489 |
| Typhoid fever | 42 | 9 | 0.685 | 0.146 |

COMPARISON OF NOTIFICATIONS OF INFECTIOUS DISEASES FOR 15 YEARS.

| | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
|-----------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Plague | — | 23 | 8 | 43 | 70 | 26 | — | 112 | 51 | 7 | — | — | 1 | 7 | 25 |
| Malaria | Notifiable February, 1930 | | | | | | | 789 | 419 | 826 | 1071 | 2102 | 3500 | 751 | 942 |
| Tuberculosis | 23 | 19 | 44 | 47 | 44 | 61 | 48 | 50 | 54 | 52 | 56 | 20 | 38 | 70 | 42 |
| Enteric fever group | 15 | 12 | 15 | 28 | 29 | 128 | 27 | 26 | 23 | 31 | 24 | 35 | 46 | 37 | 42 |
| Tropical typhus | 3 | 6 | 7 | 2 | 3 | 2 | 4 | 6 | 11 | 4 | 5 | — | 3 | 8 | 2 |
| Anthrax | 29 | 6 | 5 | 3 | 5 | 8 | 3 | 6 | 7 | 12 | 2 | 2 | 3 | 3 | 2 |
| Cerebrospinal meningitis | 18 | 9 | 8 | 7 | 16 | 18 | 6 | 19 | 7 | 3 | 4 | 4 | 14 | 21 | 24 |
| Puerperal sepsis | 1 | 4 | — | — | 3 | 8 | 16 | 10 | 6 | 2 | 13 | 5 | 8 | 4 | 15 |
| Leprosy | 4 | 4 | 9 | 14 | 6 | 5 | 1 | 4 | 4 | 1 | 3 | 1 | — | 2 | — |
| Relapsing fever | 2 | 20 | 46 | 27 | 9 | 4 | 9 | 3 | 3 | — | 4 | 2 | 7 | 5 | 10 |
| Ophthalmia neonatorum | — | — | — | — | — | — | 1 | 1 | 2 | — | 1 | 2 | 1 | — | — |
| Blackwater fever | Notifiable November, 1928 | | | | | | 4 | 5 | 2 | 2 | 4 | 14 | 14 | 2 | 2 |
| Diphtheria | — | 6 | 1 | 5 | 4 | 7 | 4 | 4 | 2 | 10 | 5 | 4 | 4 | 7 | 11 |
| Scarlet fever | — | — | — | — | — | 1 | — | 1 | 1 | — | — | — | 1 | — | 2 |
| Malta fever | 3 | 5 | 3 | 3 | 5 | — | — | — | 1 | 1 | — | 1 | — | 1 | — |
| Beri-beri | — | — | 2 | — | — | 1 | — | — | — | — | — | — | 1 | — | — |
| Erysipelas | — | 3 | — | 1 | — | — | 2 | 2 | — | 1 | 2 | 6 | 7 | 8 | 2 |
| Smallpox | 1 | — | 1 | 1 | 6 | 3 | — | — | — | — | — | — | — | — | — |
| Trypanosomiasis | — | — | — | 1 | — | 1 | 2 | 1 | — | — | 2 | — | — | — | — |
| Acute ant. poliomyelitis | — | — | — | — | — | — | — | — | 2 | — | — | 1 | — | — | — |
| Encephalitis lethargica ... | — | — | — | — | — | — | — | — | 1 | 2 | — | 3 | 1 | 1 | — |
| Glanders | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Rabies | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Cholera | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

11. INFECTIOUS AND COMMUNICABLE DISEASES.

ACUTE ANTERIOR POLIOMYELITIS.

No case was reported during the year, only three cases have been previously notified, one in 1934, and two in 1931.

ANTHRAX.

Two non-fatal cases were notified among Natives, an average of four cases has occurred annually during the past six years.

BERI-BERI.

No case of this condition was noted during the year, four previous cases have been notified, one in 1935, one in 1928, and two in 1925.

BLACKWATER FEVER.

Two Asiatic cases were reported, both of which were fatal. Since this disease was made notifiable in 1928, an average of nearly five cases a year has occurred.

CEREBROSPINAL MENINGITIS.

Twenty-four cases were notified comprising one European, four Asians, and nineteen Natives. The case mortality was high, eighteen instances having a fatal termination, three deaths occurring among the Asian and fifteen deaths among the Native cases.

For the last three years there has been a slight progressive increase in the cases notified for this condition.

During 1936, there were twenty-one cases with thirteen deaths and, in 1935, there were fourteen cases.

The cases during 1937, were evenly spread over the months with the exception of February when no case occurred.

CHICKENPOX, MEASLES, WHOOPING COUGH, MUMPS.

These non-notifiable conditions have been prevalent during the year.

Whooping cough was practically confined to the first half of the year. Chickenpox, although spread over the whole year, was more intense in the first and last quarter.

The incidence of mumps was not severe, but had its greatest intensity in the first quarter. Measles occurred regularly throughout the year with the greatest number of cases in March and October.

Judging by admissions to hospital, none of these conditions were so frequent as in the previous year.

Measles were responsible for the deaths of three Indians and two Natives, whilst one death, that of a Native, was attributed to whooping cough.

No fatal cases of chickenpox or mumps were registered.

CHOLERA.

There is no record that this disease has occurred in Nairobi.

DIPHTHERIA.

There was an increase in the number of diphtheria notifications during 1937, eleven cases being reported among two Europeans and nine Asians, four of the Asian cases having a fatal termination. During 1936, there were seven Asian cases with two deaths.

The disease did not occur in epidemic form, but spread over eight months of the year.

The average number of cases annually for the past fifteen years has been nearly five.

DYSENTERY.

No indication can be given as to the incidence of this disease as it is not notifiable, but judging by the number of deaths during the year from this condition, it may be assumed to have been more prevalent than in 1936.

Sixteen deaths were recorded among two Indians, twelve Natives, and two Somalis, compared with five deaths recorded in 1936.

ENCEPHALITIS LETHARGICA.

No case was reported. Eight cases have been previously notified, one in 1936, one in 1935, three in 1934, two in 1932, and one in 1931.

ENTERIC FEVER GROUP.

There was a slight increase in the notification from this condition, forty-two cases being reported, against thirty-seven in 1936.

The forty-two cases comprised one European, twenty-one Indians, two Goans, and eighteen Natives. Nine of these cases, namely, one European, three Indian, one Goan, and four Native, had a fatal termination. The disease did not assume epidemic proportions, but was fairly evenly spread over the months with the exception of December when there were eight cases and August when there were no cases.

ERYSIPELAS.

Two Indian cases of erysipelas were notified with one death. During the previous three years, six, seven, and eight cases were notified respectively.

GLANDERS, RABIES.

Neither of these diseases have yet been reported in Nairobi.

LEPROSY.

No case was reported during the year although one Native death was recorded from this disease.

MALTA FEVER.

No case was reported during the year.

MALARIA.

Detailed information regarding this disease is given under a separate section of this report.

OPHTHALMIA NEONATORUM.

No cases were reported during 1937.

PLAGUE.

This disease is discussed under a separate section of this report.

PNEUMONIA.

This disease is not notifiable so it is only possible to judge the severity of the incidence in relation to deaths.

During 1937, pneumonia was responsible for 301 deaths and bronchopneumonia for 136 deaths, a total of 437. This total shows a marked increase over the total for 1936, when the number was 326.

The percentage of deaths from the pneumonias to total deaths during the year amounted to 42.0 per cent, the highest for some years. The comparative figures for the previous five years were 40.9 per cent, 36.9 per cent, 39.5 per cent, 34.1 per cent, and 36.1 per cent.

Of the 437 deaths from this condition, 118 deaths were of infants under one year of age.

The annual death rate for the pneumonias per thousand of population for all races, during 1937, was 7.1 compared with 6.5 for 1936; it is interesting to note the difference in the rates for the several communities, European 0.3, Asian 4.5, Native 9.3. These figures would appear to indicate that housing is in some way partly responsible for the condition.

PUERPERAL SEPSIS.

Fifteen Indian cases of puerperal sepsis with five deaths were notified compared with four Indian cases with one death during the previous year.

Although more cases were notified than in 1936, this obviously does not represent a true picture of the incidence of this disease. As mentioned in the last report, it may be advisable to institute some scheme whereby the maternal condition during the puerperium can be more closely followed.

RELAPSING FEVER.

One Indian case and nine Native cases were reported with no deaths. These cases occurred during the second and last quarters of the year. This is the largest number of cases reported in one year since 1926, when there were twenty-seven cases.

SCARLET FEVER.

Two European cases, one each in April and May were recorded. Only four cases have been notified during the previous nine years.

TICK TYPHUS.

Two European cases were recorded during December. Over the previous five years, four cases have been reported annually.

TUBERCULOSIS.

Tuberculosis of all forms was notified in forty-two instances during the year, thirty-two of these referred to the pulmonary variety and the remaining ten to forms other than pulmonary.

Of the pulmonary manifestations, no Europeans were notified, although one death was recorded. Seven Indians were notified with one Goan death, twenty-four Natives and one Chinese case were notified with twenty Native deaths.

Of the manifestations other than pulmonary, three were Native meningitis cases, one was a Native peritonitis fatal case and one each were non-fatal Native cases of spine and adenitis, together with four Native fatal cases of disseminated tuberculosis.

The incidence rate for all forms of notified tuberculosis equalled 0.68 per thousand population compared with 1.40 during 1936.

The death rate for this disease was 0.48 per thousand population compared with 0.32 for 1936.

12. ADMISSIONS TO HOSPITAL.

The following details are of patients resident in the Municipality admitted to each of the three institutions available, namely, European Hospital, Native Hospital, and Infectious Diseases Hospital for infectious or communicable diseases requiring segregation for the public welfare.

These institutions are conducted by the Government but the Municipality is responsible for patients from the Municipality to the extent of payment for treatment.

The admissions during 1937 were considerably less than the previous year, being 266 compared with 524, whilst the total patient days decreased from 9,765 to 7,372.

During 1935 and 1934, the patient days totalled 7,882 and 7,920 respectively.

The patient days for tuberculosis, namely, 3,418, were slightly less than in 1936, although during that year they more than doubled themselves.

The patient days for chickenpox and measles totalled 848 and 668 compared with 950 and 1,478 during the previous year.

The days in hospital on account of leprosy decreased from 1,378 to 884.

Typhoid fever was also responsible for fewer patient days than in 1936, namely 453 against 617.

The days for mumps and whooping cough were less than last year although increases were registered for cerebrospinal meningitis, anthrax, and plague, whilst relapsing fever increased from 55 to 102.

Only 16 patient days were recorded for tick typhus and 57 days for skin conditions.

The following tables give the details of admissions, patient days, and seasonal incidence of the diseases for the races in the hospitals concerned:—

EUROPEAN HOSPITAL.

| Month. | | Admissions. Patient days. | | | |
|-----------|-----|---------------------------|---|-----|----|
| January | ... | ... | — | ... | — |
| February | ... | ... | 1 | ... | 7 |
| March | ... | ... | — | ... | — |
| April | ... | ... | — | ... | — |
| May | ... | ... | — | — | — |
| June | ... | ... | — | ... | — |
| July | ... | ... | — | ... | — |
| August | ... | ... | — | ... | — |
| September | ... | ... | — | ... | — |
| October | ... | ... | — | ... | — |
| November | ... | ... | 1 | ... | 3 |
| December | ... | ... | 1 | ... | 13 |
| TOTAL | | ... | 3 | ... | 23 |

NATIVE HOSPITAL.

| | ASIATIC. | | NATIVE. | | TOTAL. | |
|-----------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Admis- sions. | Patient days. | Admis- sions. | Patient days. | Admis- sions. | Patient days. |
| January | ... | — | ... | 1 | ... | 97 |
| February | ... | — | ... | 6 | ... | 133 |
| March | ... | — | ... | 7 | ... | 254 |
| April | ... | — | ... | 4 | ... | 188 |
| May | ... | 1 | ... | 4 | ... | 65 |
| June | ... | — | ... | 2 | ... | 58 |
| July | ... | 1 | ... | 5 | ... | 75 |
| August | ... | — | ... | 2 | ... | 91 |
| September | ... | — | ... | 2 | ... | 64 |
| October | ... | — | ... | 13 | ... | 170 |
| November | ... | — | ... | 13 | ... | 159 |
| December | ... | 2 | ... | 7 | ... | 215 |
| TOTAL | ... | 4 | ... | 66 | ... | 1569 |

INFECTIOUS DISEASES HOSPITAL.

| | WHITE. | | ASIATIC. | | NATIVE. | | TOTAL. | |
|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Admis- sions. | Patient days. | Admis- sions. | Patient days. | Admis- sions. | Patient days. | Admis- sions. | Patient days. |
| January | ... | — | ... | — | ... | 22 | ... | 705 |
| February | ... | 1 | ... | — | ... | 14 | ... | 547 |
| March | ... | *4 | ... | 2 | ... | 24 | ... | 631 |
| April | ... | 1 | ... | — | ... | 17 | ... | 542 |
| May | ... | — | ... | — | ... | 9 | ... | 425 |
| June | ... | — | ... | — | ... | 17 | ... | 414 |
| July | ... | — | ... | — | ... | 15 | ... | 382 |
| August | ... | — | ... | — | ... | 9 | ... | 334 |
| Sept. | ... | — | ... | 5 | ... | 10 | ... | 345 |
| October | ... | — | ... | — | ... | 13 | ... | 381 |
| November | ... | — | ... | — | ... | 23 | ... | 417 |
| December | ... | — | ... | — | ... | 7 | ... | 464 |
| TOTAL | ... | 6 | ... | 7 | ... | 180 | ... | 5587 |

* Seychellois 4. Admissions 69 days.

MUNICIPAL PATIENTS—SUMMARY.

| Hospital. | WHITE. | | ASIATIC. | | NATIVE. | | TOTAL. | |
|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Admis- sions. | Patient days. | Admis- sions. | Patient days. | Admis- sions. | Patient days. | Admis- sions. | Patient days. |
| European ... | 3 | 23 | ... | — | ... | — | ... | 23 |
| Native ... | — | — | ... | 4 | ... | 18 | ... | 1587 |
| Inf. diseases | 5 | 88 | ... | 7 | ... | 87 | ... | 5762 |
| TOTAL ... | 8 | 111 | ... | 11 | ... | 105 | ... | 7372 |

MUNICIPAL PATIENT DAYS BY RACES.

| | White. | | Asiatic. | | Native. | | Total. |
|--------------------------|--------|-----|----------|-----|---------|------|--------|
| Leprosy ... | ... | — | ... | — | ... | 884 | 884 |
| Tuberculosis ... | ... | 7 | ... | 69 | ... | 3342 | 3418 |
| Anthrax ... | ... | — | ... | — | ... | 136 | 136 |
| Whooping cough ... | ... | — | ... | — | ... | 104 | 104 |
| Mumps ... | ... | — | ... | — | ... | 309 | 309 |
| Measles ... | ... | 8 | ... | — | ... | 668 | 676 |
| Chickenpox ... | ... | 69 | ... | 9 | ... | 770 | 848 |
| Cerebrospinal meningitis | ... | 11 | ... | 8 | ... | 215 | 234 |
| Plague ... | ... | — | ... | 12 | ... | 123 | 135 |
| Eczema ... | ... | — | ... | — | ... | 14 | 14 |
| Scabies ... | ... | — | ... | — | ... | 43 | 43 |
| Typhoid fever ... | ... | — | ... | 7 | ... | 446 | 453 |
| Tropical typhus ... | ... | 16 | ... | — | ... | — | 16 |
| Relapsing fever ... | ... | — | ... | — | ... | 102 | 102 |
| TOTAL ... | ... | 111 | ... | 105 | ... | 7156 | 7372 |

MUNICIPAL PATIENT DAYS BY MONTHS.

| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | TOTAL. |
|--------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|
| Leprosy ... | 124 | 112 | 93 | 89 | 69 | 60 | 62 | 62 | 60 | 62 | 60 | 31 | 884 |
| Tuberculosis ... | 294 | 386 | 427 | 404 | 371 | 208 | 197 | 226 | 188 | 241 | 194 | 282 | 3418 |
| Anthrax ... | 13 | — | — | — | — | 4 | 62 | 34 | 23 | — | — | — | 136 |
| Whooping cough ... | 69 | 9 | — | 10 | 1 | 15 | — | — | — | — | — | — | 104 |
| Mumps ... | 45 | 58 | 60 | 34 | — | 6 | 28 | 6 | — | — | 55 | 17 | 309 |
| Measles ... | 85 | 30 | 156 | 77 | 49 | 62 | 47 | 48 | 32 | 66 | 12 | 12 | 676 |
| Chickenpox ... | 110 | 65 | 128 | 68 | 23 | 95 | 15 | 2 | 22 | 63 | 114 | 143 | 848 |
| Cerebrospinal meningitis | 31 | 28 | — | 11 | — | — | 4 | 1 | — | 24 | 69 | 66 | 234 |
| Plague ... | — | — | — | — | — | 1 | 2 | 12 | 76 | 34 | 10 | — | 135 |
| Eczema ... | — | — | — | — | — | — | 1 | 6 | 7 | — | — | — | 14 |
| Scabies ... | — | — | — | — | — | — | 4 | 26 | 13 | — | — | — | 43 |
| Typhoid fever ... | 31 | 7 | 112 | 56 | 3 | 21 | 42 | 2 | — | 32 | 46 | 101 | 453 |
| Tick typhus ... | — | — | — | — | — | — | — | — | — | — | 3 | 13 | 16 |
| Relapsing fever ... | — | — | — | 22 | — | — | — | — | — | 29 | 16 | 35 | 102 |
| TOTAL ... | 802 | 695 | 976 | 771 | 516 | 472 | 464 | 425 | 421 | 551 | 579 | 700 | 7372 |

13. PLAGUE.

Human plague occurred within the Municipality to the extent of 25 cases, mostly during the latter half of the year.

The first two cases were in April, and as there were indications of the infection spreading, wholesale inoculations were performed to the extent of 32,000.

All the cases were confirmed bacteriologically and the usual precautions of intensive rat catching, isolation of contacts, cleansing of premises, etc., were carried out in each instance.

Of the 25 cases, only three recovered; thus the case mortality was 88.0%.

The outbreak was characterised by the sporadic nature of the infection. Three of the cases had no fixed abode and the remaining 22 cases were spread over no less than seven different localities. Only in one instance was more than one case located in the same house.

A short summary of the cases is given below:—

| Case No. | Date. | Race. | Location. | Result. |
|----------|----------------|--------|-------------------|-----------|
| 1. | April 8th | Native | No fixed abode | Died |
| 2. | April 8th | Indian | River Road | Died |
| 3. | June 10th | Indian | Canal Road | Died |
| 4. | June 16th | Native | No fixed abode | Died |
| 5. | June 19th | Native | Pangani | Died |
| 6. | June 19th | Native | Pangani | Died |
| 7. | June 19th | Native | Pangani | Died |
| 8. | June 19th | Native | Pangani | Died |
| 9. | June 23rd | Native | Pangani | Died |
| 10. | June 24th | Indian | Bazaar | Died |
| 11. | June 24th | Native | Pangani | Died |
| 12. | June 28th | Native | Pumwani | Died |
| 13. | July 30th | Native | Pumwani | Died |
| 14. | August 30th | Native | Municipal Housing | Recovered |
| 15. | September 3rd | Native | Pumwani | Recovered |
| 16. | September 4th | Native | Bazaar | Died |
| 17. | September 14th | Indian | Bazaar | Died |
| 18. | September 23rd | Native | Pumwani | Died |
| 19. | October 2nd | Native | Pumwani | Recovered |
| 20. | October 12th | Indian | Parklands | Died |
| 21. | October 22nd | Native | No fixed abode | Died |
| 22. | October 23rd | Native | Pumwani | Died |
| 23. | November 6th | Native | Pumwani | Died |
| 24. | November 19th | Native | Pumwani | Died |
| 25. | November 19th | Native | Pumwani | Died |

Cases numbered 7, 8 and 9 were presumed to have acquired their infection within the native location of Pangani but died outside the Municipality.

Cases numbered 13 and 14 only arrived in Nairobi a few days before symptoms appeared and might have acquired their infection outside.

Plague has been prevalent in the reserves in the neighbourhood of Nairobi and the frequent service of native motor buses tends to the spread of the disease in the towns served as it is common for a native feeling ill to board a bus and come to Nairobi for treatment.

The last epidemic of plague commenced in 1930 when there were 112 cases. This epidemic lasted through 1931 with 51 cases into 1932 with seven cases.

During 1935 there was one case only, whilst during 1936, seven occurred sporadically throughout the Municipality.

14. MALARIA.

Malaria was made notifiable during February, 1930. During 1937, 1,235 cases were notified, 1,025 being residents and 210 non-residents, as compared with 1,000 cases notified during 1936. Of these 902 were residents and 98 non-residents.

MALARIA NOTIFICATIONS.

| Month. | RESIDENT. | | | | NON-RESIDENT. | | | | TOTAL. | |
|---------------|-----------|----------|---------|-------|---------------|----------|---------|--------|--------|------|
| | White. | Asiatic. | Native. | Total | White. | Asiatic. | Native. | Total. | | |
| January ... | 4 | 24 | 8 | 36 | 4 | — | — | 4 | ... | 40 |
| February ... | 3 | 12 | 5 | 20 | 1 | 2 | 1 | 4 | ... | 24 |
| March ... | — | 22 | 8 | 30 | — | 3 | 2 | 5 | ... | 35 |
| April ... | 2 | 25 | 19 | 46 | 3 | 2 | — | 5 | ... | 51 |
| May ... | 3 | 47 | 7 | 57 | 1 | 2 | — | 3 | ... | 60 |
| June ... | 7 | 57 | 26 | 90 | 5 | 1 | 6 | 12 | ... | 102 |
| July ... | 7 | 115 | 108 | 230 | 5 | 7 | 28 | 40 | ... | 270 |
| August ... | 14 | 121 | 117 | 252 | 17 | 11 | 51 | 79 | ... | 331 |
| September ... | 3 | 66 | 66 | 135 | 3 | — | 15 | 18 | ... | 153 |
| October ... | 4 | 31 | 17 | 52 | 1 | 3 | 6 | 10 | ... | 62 |
| November ... | — | 15 | 13 | 28 | — | 1 | 21 | 22 | ... | 50 |
| December ... | 11 | 25 | 13 | 49 | 7 | 1 | — | 8 | ... | 57 |
| TOTAL ... | 58 | 560 | 407 | 1025 | 47 | 33 | 130 | 210 | ... | 1235 |

LOCALLY ACQUIRED INFECTIONS.

| Month. | White. | Asiatic. | Native. | TOTAL. |
|---------------|--------|----------|---------|--------|
| January ... | 4 | 23 | 1 | 28 |
| February ... | 1 | 11 | — | 12 |
| March ... | — | 22 | 4 | 26 |
| April ... | — | 24 | 11 | 35 |
| May ... | 3 | 46 | 6 | 55 |
| June ... | 5 | 57 | 25 | 87 |
| July ... | 5 | 111 | 103 | 219 |
| August ... | 6 | 116 | 115 | 237 |
| September ... | 2 | 65 | 61 | 128 |
| October ... | 2 | 27 | 15 | 44 |
| November ... | — | 15 | 13 | 28 |
| December ... | 7 | 23 | 13 | 43 |
| TOTAL ... | 35 | 540 | 367 | 942 |

The seasonal incidence of the locally acquired infections as shown by the above figures shows a decrease in February with a gradual rise until May and then a rapid rise to a peak in August, followed by a slight fall in September and then a steep fall to the end of the year.

The curve thus shown follows the rainfall curve with an interval of two months. The rainfall graph has its peak in April, keeps high in May, then falls steeply until the short rains of October, November, and December. The incidence in December indicates a small rise.

INCIDENCE OF NOTIFIED MALARIA PER 1,000 PERSONS.

| Race. | | | 1931. | 1932. | 1933. | 1934. | 1935. | 1936. | 1937. |
|-----------|-----|-----|-------|-------|-------|-------|--------|-------|-------|
| White | ... | ... | 13.9 | 13.81 | 8.18 | 17.40 | 26.58 | 10.53 | 5.83 |
| Asiatic | ... | ... | 10.87 | 7.41 | 15.36 | 77.32 | 101.50 | 34.0 | 31.21 |
| Native | ... | ... | 6.73 | 24.20 | 29.66 | 24.81 | 59.92 | 10.67 | 9.65 |
| All races | ... | ... | 8.81 | 17.64 | 22.60 | 40.57 | 69.93 | 18.04 | 15.36 |

The following tables present an analysis of the notified cases of malaria. The diagnosis of all the notified cases, with the exception of those termed "Clinical" has been supported by laboratory evidence.

In the case of those termed "Clinical," the laboratory finding was either absent or negative and evidence was produced that reasonable care had been taken in diagnosis.

Endeavour has been made since the inception of the notification of malaria to classify each case according to the location of the probable source of infection.

All the cases are placed in one of the following categories:—

1. NAIROBI. More or less conclusive evidence of infection taking place within the Municipality.
2. Ex NAIROBI. Evidence of infection taking place outside the Municipality.
3. DOUBTFUL. Cases not falling into the previous categories or in which no definite information could be obtained.

PROBABLE SOURCE OF INFECTION.

| Source of infection | | | | NUMBER OF CASES. | | | | | |
|---------------------|-----|-----|-----|------------------|------|------|------|------|-----------|
| | | | | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 1937 |
| Nairobi | ... | ... | ... | 79 | 243 | 865 | 1924 | 3281 | 751 942 |
| Ex Nairobi | ... | ... | ... | 133 | 214 | 184 | 169 | 219 | 151 83 |
| Doubtful | ... | ... | ... | 208 | 379 | 22 | 9 | — | — — |
| TOTAL | ... | ... | ... | 420 | 836 | 1071 | 2102 | 3500 | 902 1025 |

| Source of infection. | | | | PERCENTAGE. | | | | | |
|----------------------|-----|-----|-----|-------------|-------|-------|-------|-------|-------------|
| | | | | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 1937 |
| Nairobi | ... | ... | ... | 18.8 | 29.1 | 80.8 | 91.5 | 93.7 | 83.3 91.9 |
| Ex Nairobi | ... | ... | ... | 31.7 | 25.6 | 17.2 | 8.1 | 6.3 | 16.7 8.1 |
| Doubtful | ... | ... | ... | 49.5 | 45.3 | 2.0 | .04 | — | — — |
| TOTAL | ... | ... | ... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 100.0 |

The percentage of locally acquired infection is higher than in 1936 and the percentage of infection acquired outside the Municipality has decreased accordingly.

Once again there are no doubtful records.

Classification of the recorded cases according to the type of infection and the probable source is set out below:—

TYPE OF INFECTION AND PROBABLE SOURCE.

| Probable source. | | | Clinical. | | Benign tertian. | | Quartan. | | Sub-tertian. | | Double infections. | | Total cases. |
|---------------------|-----|-----|-----------|-----|-----------------|-----|----------|-----|--------------|-----|--------------------|-----|--------------|
| Nairobi | ... | ... | 32 | ... | 46 | ... | 6 | ... | 858 | ... | 5 | ... | 942 |
| Ex Nairobi | ... | ... | 2 | ... | 4 | ... | 4 | ... | 73 | ... | — | ... | 83 |
| Doubtful | ... | ... | — | ... | — | ... | — | ... | — | ... | — | ... | — |
| Total residents | ... | ... | 34 | ... | 50 | ... | 10 | ... | 931 | ... | 5 | ... | 1025 |
| Total non-residents | ... | ... | 4 | ... | 9 | ... | 4 | ... | 197 | ... | 4 | ... | 210 |
| TOTAL | ... | ... | 38 | ... | 59 | ... | 14 | ... | 1128 | ... | 9 | ... | 1235 |

PERCENTAGE OF TYPES OF INFECTIONS.

| Type. | | | Nairobi. | | Ex Nairobi. | | Non-resident. | | Percentage total cases. |
|----------------|-----|-----|----------|-----|-------------|-----|---------------|-----|-------------------------|
| Clinical | ... | ... | 3.4 | ... | 2.4 | ... | 1.9 | ... | 3.1 |
| Benign tertian | ... | ... | 4.8 | ... | 4.8 | ... | 4.3 | ... | 4.7 |
| Quartan | ... | ... | 0.6 | ... | 4.8 | ... | 1.4 | ... | 1.1 |
| Sub-tertian | ... | ... | 91.1 | ... | 87.9 | ... | 92.3 | ... | 90.9 |

For 1937, the sub-tertian infections represents the major portion of the total cases. During the year this figure was 90.9% compared with 80.0% for 1936.

The benign tertian rate for Nairobi, 4.8% shows a considerable decrease compared with the figure for 1936 of 16.9%.

Quartan infection also shows a decrease from 2.9% for 1936 to 0.6% during 1937.

The clinical cases remain almost constant.

In non-resident cases, the sub-tertian rate shows an increase from 87.9% to 92.3% at the expense of the other types.

For comparative purposes and for the purpose of this report, the Municipality has been divided into ten districts, the names of these districts being sufficient to indicate their position.

The following table indicates the number of cases of malaria notified from each of the under-mentioned districts.

NAIROBI INFECTIONS.

| District. | Number of cases notified. | | | | | | |
|------------------------|---------------------------|------|------|------|------|------|------|
| | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
| 1. Upper Parklands ... | — | 1 | 3 | 4 | 5 | 4 | 1 |
| 2. Muthaiga ... | — | 1 | 8 | 21 | 17 | 1 | 2 |
| 3. Westlands ... | — | 1 | — | 3 | 11 | 1 | — |
| 4. Parklands ... | 4 | 9 | 31 | 47 | 56 | 17 | 31 |
| 5. Forest Road ... | 6 | 14 | 133 | 266 | 458 | 141 | 129 |
| 6. Racecourse Road ... | 3 | 42 | 128 | 137 | 499 | 98 | 118 |
| 7. Eastleigh ... | — | 8 | 30 | 36 | 108 | 11 | 51 |
| 8. Kilimani ... | 2 | 10 | 19 | 12 | 24 | 2 | 7 |
| 9. Hill ... | 2 | 23 | 63 | 113 | 100 | 19 | 41 |
| 10. Commercial ... | 62 | 134 | 450 | 1285 | 2103 | 457 | 562 |
| TOTAL ... | 79 | 243 | 865 | 1924 | 3381 | 751 | 942 |

Once again we repeat the statement that the Nairobi Swamp is a continual source of danger to the community.

The close settlement in the area contiguous to the swamp is in the unhappy position of having the greatest number of malarial cases.

Double infections were recorded in nine instances during 1937, one of the double infections being sub-tertian and quartan and the remainder sub-tertian and benign tertian.

It is of interest to note that all these cases were contracted outside the Municipality during the months of August to November.

The mortality rate of the cases notified reached a figure of 3.4% compared with 4.6% for 1936.

The death rate from malaria per thousand population during 1937 was 0.61, compared with 0.64 in 1936.

Details of deaths from malaria for a number of years will be found hereunder.

Two fatal Asian cases of blackwater fever were recorded during the year, one during the month of August and one during October.

DEATHS FROM MALARIA AND RATES FOR 19 YEARS.

| Year. | number of deaths. | Death rate per 1,000 |
|----------|-------------------|----------------------|
| 1919 ... | 47 | — |
| 1920 ... | 37 | — |
| 1921 ... | 22 | — |
| 1922 ... | 29 | — |
| 1923 ... | 28 | — |
| 1924 ... | 32 | — |
| 1925 ... | 19 | — |
| 1926 ... | 130 | — |
| 1927 ... | 25 | 1.1 |
| 1928 ... | 27 | 0.60 |
| 1929 ... | 27 | 0.56 |
| 1930 ... | 39 | 0.82 |
| 1931 ... | 17 | 0.35 |
| 1932 ... | 20 | 0.42 |
| 1933 ... | 24 | 0.50 |
| 1934 ... | 32 | 0.67 |
| 1935 ... | 58 | 1.15 |
| 1936 ... | 32 | 0.64 |
| 1937 ... | 38 | 0.61 |

15. ANTI-MALARIAL WORKS.

As a routine the whole length of the concrete anti-malarial canals and newly constructed drains were inspected at frequent intervals, cleaning and repairing taking place when and where necessary.

Several large sections of the canal in the City Park were damaged during the heavy rains from May to June, and these have now been repaired.

The Ngong stream from the Municipal boundary by the railway quarries to the junction of the concrete canal was cleared, banks being cut and repaired.

The Nairobi River was given attention by cutting and clearing the bed of silt, and recutting of the Getathuru River was carried out from the junction of the Mathari upstream to the Limuru Road bridge.

Mathari River was cleared, the banks cut and repaired from the Mathari Hospital to a point beyond the Limuru Road bridge.

Cutting, re-strengthening, and repairing of the banks and cleaning the stream, which originates in the Upper Hill Estate crossing Ngong Road to join the Ngong River, was necessitated after the heavy rains experienced.

Several small swamps and seepages were drained and kept clean of grass to facilitate oiling.

The drains and auxilliary drains in Spring Valley Estate, between Lower Kabete and Marlborough Roads required constant attention owing to the nature of the black cotton soil through which they are cut. It is hoped that these drains will be concreted in the future.

The recreation ground drains, at Westlands, were also cleared and re-cut. Numerous murrum pits were filled in in various parts of the Municipal area.

The streams on either side of Chiromo were cut and cleared of grass and bush, the banks repaired, and the stream bed cleared.

The Kirichwa Kubwa stream was constantly oiled as cleaning this stream would be too big an undertaking owing to the rocky formation of its bed. Cattle here have done much damage by breaking earth banks and causing muddy pools.

The anti-malarial gang was also employed from time to time cutting and clearing vacant plots of bush and long grass.

OILING.

During the year a total of 9,943 gallons of oil mixture was used in the endeavour to control mosquito breeding places.

Towards the end of the year, the oiling gang worked in direct conjunction with the searchers.

6,491 breeding and potential breeding places were dealt with.

A total of 600 gallons of spraying fluid for killing adult mosquitoes was issued.

The lorry used in connection with the anti-malaria work travelled 9,816 miles during the year. This lorry is also utilised for transporting by-products from the abattoir to the station.

16. LABORATORY.

During the year the decision of the Council to make further efforts in the control of malaria was given effect to, an anti-malaria officer was appointed, native staff employed, and a laboratory established on the top floor of the Town Hall.

The anti-malaria officer, who had had previous training, was kindly given further instruction by the Government Medical Department both at the Medical Laboratories and at their stations at Kisumu and Kakamega.

The native staff, comprising six searchers, was trained at the Government Medical Laboratories.

The staff thus trained commenced duties during the middle of August at the headquarters established in the Town Hall.

In addition to the searchers mentioned above, the anti-malaria officer has control over six oiling boys, a labour gang of 20 boys, and also three gangs of three boys employed in the cleaning of roadside drains.

A resumé of the work performed at the laboratory will be found hereunder as well as in the section "Malaria," whilst the field work will be found recorded in the sections "Anti-malarial Works" and "Anti-malarial Measures."

The undermentioned mosquitoes have been recorded in Nairobi:—

ANOPHELES:

Anopheles gambiae (costalis).

„ *mauritanus*.

„ *cinereus*.

„ *christyi*.

„ *squamosus*.

„ *pretoriensis*.

„ *pharoensis*.

„ *maculipalpis*.

„ *demeilloni*.

AEDES:

Aedes (*Stegomyia*) *aegypti*.

„ (*Mucidus*) *scatafagoides*.

„ (*Aedimorphus*) *hirsutus*.

„ „ *quasiunivittatus*.

„ „ *dentatus*.

„ „ *liniatopennis*.

„ „ *lamborni*.

„ „ *haworthi*.

„ „ *cumminsi*.

„ „ *argenteopunctatus*.

„ „ *pulchrithorax* sp. Nov.

CULEX:

| | |
|------------------|--------------------|
| Culex (Neoculex) | rubinotus. |
| „ | „ salisburyensis. |
| „ | (Lutzia) tigripes. |
| „ | (Culex) pipiens. |
| „ | „ fatigans. |
| „ | „ vansomereni. |
| „ | „ pallidocephalus. |
| „ | „ bitaeniorhyncus. |
| „ | „ duttoni. |
| „ | „ decens. |
| „ | „ grahami. |
| „ | „ univittatus. |
| „ | „ simpsoni. |
| „ | „ trifilatus. |
| „ | „ theileri. |
| „ | „ annulioris. |

Two Culex species unknown.

A number of adult mosquitoes were bred for exhibition purposes. They were duly named and mounted, also a type series of larvae were prepared.

Experiments were conducted with fish as a larvicide, the fish used being *Barbus nairobiensis* and *percivali*. Both varieties were found to take larvae readily.

Experiments were also conducted on the effect as a larvicide of a mixture of pyrethrum paraffin and soap so as not to injure plants or fish in artificial ponds. It is hoped to continue these experiments in 1938.

In the field a series of experiments were conducted on the quarry sites to estimate the value of using weighted oiled sacks in connection with oiling. This method proved to be satisfactory when dealing with deep quarry holes.

Meteorological instruments were read daily and the results recorded.

On three occasions adult mosquito surveys were made and the catches examined and identified.

Routine examination and identification of the larvae brought in by the searchers is made and recorded.

The following figures indicate the number of larvae submitted and examined:—

| | | | | |
|-----------|-----|-----|-----|-------|
| September | ... | ... | ... | 2,109 |
| October | ... | ... | ... | 1,239 |
| November | ... | ... | ... | 1,637 |
| December | ... | ... | ... | 1,147 |
| <hr/> | | | | |
| Total | ... | ... | ... | 6,132 |
| <hr/> | | | | |

During the year a new specimen of *Aedes* was discovered from the City Park breeding in tree holes by the Medical Laboratory staff, and named *Aedes finlaya pulchrithorax*. This new species was soon afterwards taken by our searchers and bred out in our laboratory.

Two species of *Culex* larvae were collected, apparently hitherto unknown. Further work is being conducted regarding the breeding out and identification of these specimens.

From the month of October a percentage of the daily rat catch has been examined for *B. pestis*, with the following results:—

| Month. | | | Rats examined. | | Rats positive. | |
|----------|-----|-----|----------------|-----|----------------|--|
| October | ... | ... | 233 | ... | — | |
| November | ... | ... | 176 | ... | 2 | |
| December | ... | ... | 236 | ... | 1 | |
| TOTAL | ... | ... | 645 | ... | 3 | |

It was noted that none of the trapped rats were positive. The three positive rats were found dead by the rat gang.

NUMBER OF BREEDING PLACES IN RELATION TO SECTIONS.

| Section. | August. | September. | October. | November. | December. | TOTAL. | | | | | | |
|----------------|---------|------------|----------|-----------|-----------|--------|------|-----|------|-----|------|-----|
| 1 | ... | 15 | ... | 17 | ... | 9 | ... | 18 | ... | 13 | ... | 72 |
| 2 | ... | 12 | ... | 22 | ... | 24 | ... | 31 | ... | 22 | ... | 111 |
| 3 | ... | 9 | ... | 22 | ... | 2 | ... | 15 | ... | 10 | ... | 58 |
| 4 | ... | 2 | ... | 2 | ... | 5 | ... | 28 | ... | 4 | ... | 41 |
| 5 | ... | — | ... | 16 | ... | 5 | ... | 26 | ... | 16 | ... | 63 |
| 6 | ... | 19 | ... | 16 | ... | 13 | ... | 26 | ... | 30 | ... | 104 |
| 7 | ... | — | ... | 5 | ... | 12 | ... | 35 | ... | 15 | ... | 67 |
| 8 | ... | — | ... | 10 | ... | 6 | ... | 38 | ... | 19 | ... | 73 |
| 9 | ... | 8 | ... | 9 | ... | 22 | ... | 24 | ... | 9 | ... | 72 |
| 10 | ... | 2 | ... | 8 | ... | 3 | ... | 12 | ... | 25 | ... | 50 |
| 11 | ... | 12 | ... | 49 | ... | 8 | ... | 20 | ... | 21 | ... | 110 |
| 12 | ... | 8 | ... | 11 | ... | 14 | ... | 11 | ... | 9 | ... | 53 |
| 13 | ... | — | ... | 12 | ... | 8 | ... | — | ... | — | ... | 20 |
| 14 | ... | — | ... | 10 | ... | 15 | ... | 16 | ... | 17 | ... | 58 |
| 15 | ... | 1 | ... | 1 | ... | 6 | ... | 10 | ... | 10 | ... | 28 |
| 16 | ... | 31 | ... | 29 | ... | 26 | ... | 44 | ... | 30 | ... | 160 |
| 17 | ... | 24 | ... | 18 | ... | 14 | ... | 18 | ... | 49 | ... | 123 |
| 18 | ... | 3 | ... | 9 | ... | 8 | ... | 3 | ... | 60 | ... | 83 |
| 19 | ... | — | ... | — | ... | 7 | ... | 13 | ... | 29 | ... | 49 |
| 20 | ... | — | ... | 12 | ... | 1 | ... | 22 | ... | 16 | ... | 51 |
| 21 | ... | — | ... | 12 | ... | 9 | ... | 18 | ... | 3 | ... | 42 |
| 22 | ... | 7 | ... | 13 | ... | 9 | ... | 16 | ... | 10 | ... | 55 |
| 23 | ... | — | ... | — | ... | — | ... | — | ... | — | ... | — |
| 24 | ... | — | ... | 6 | ... | 14 | ... | 30 | ... | 8 | ... | 58 |
| Total ... | 153 | ... | 309 | ... | 240 | ... | 474 | ... | 425 | ... | 1601 | |
| Rainfall. ins. | 0.16 | ... | 0.22 | ... | 5.58 | ... | 6.09 | ... | 2.32 | | | |

NUMBER AND TYPES OF BREEDING PLACES.

| | August. | September. | October. | November. | December. | TOTAL. |
|-------------------------|---------|------------|----------|-----------|-----------|--------|
| Drains | 15 | 55 | 41 | 99 | 101 | 311 |
| Road drains | 15 | 12 | 16 | 63 | 62 | 168 |
| Rainpools | 17 | 9 | 9 | 101 | 88 | 224 |
| Edges of streams | 49 | 100 | 71 | 54 | 8 | 282 |
| Quarries | 2 | 9 | 10 | 19 | 16 | 56 |
| Murrum pits | 3 | 4 | 15 | 47 | 61 | 130 |
| Borrow pits | 3 | 8 | 6 | 9 | 21 | 47 |
| Irrigation channels | 28 | 39 | 21 | 30 | 9 | 127 |
| Foot prints | 8 | 15 | 16 | 9 | 10 | 58 |
| Swamps | 1 | 9 | 7 | 7 | 19 | 43 |
| Rock pools | 3 | 16 | 3 | 16 | 10 | 48 |
| Springs | — | 2 | 10 | 5 | 5 | 22 |
| Seepages | 2 | 15 | — | 2 | 4 | 23 |
| Concrete containers | 5 | 12 | 10 | 9 | 5 | 41 |
| Domestic utensils ... | 2 | 4 | 3 | 3 | 4 | 16 |
| Others | — | — | 2 | 1 | 2 | 5 |
| TOTAL | 153 | 309 | 240 | 474 | 425 | 1601 |

RECORD OF ANOPHELES BREEDING.

| <i>A. costalis.</i> | | | | | | | | Other anopheles. | | | | | | |
|---------------------|------|-------|------|------|------|--------|-----|------------------|-------|------|------|------|--------|--|
| | Aug. | Sept. | Oct. | Nov. | Dec. | Total. | | Aug. | Sept. | Oct. | Nov. | Dec. | Total. | |
| Drains | 3 | 5 | 4 | 6 | 9 | 27 | ... | 22 | 37 | 12 | 18 | 23 | 112 | |
| Road drains | — | 2 | 1 | — | — | 3 | ... | — | 9 | 7 | 9 | 11 | 36 | |
| Rainpools | 1 | — | — | — | 1 | 2 | ... | 10 | 8 | 1 | 10 | 15 | 44 | |
| Streams | 4 | 14 | 5 | 1 | — | 24 | ... | 32 | 62 | 37 | 21 | 2 | 154 | |
| Quarries | — | 4 | — | — | — | 4 | ... | 2 | 5 | 5 | 2 | 4 | 18 | |
| Murrum pits | — | 2 | 3 | 1 | — | 6 | ... | 3 | 5 | 5 | 9 | 12 | 34 | |
| Borrow pits | — | — | — | — | — | — | ... | 2 | 6 | 2 | — | 2 | 12 | |
| Irrigation channels | 9 | 3 | — | 2 | 1 | 15 | ... | 20 | 30 | 2 | 7 | 3 | 62 | |
| Foot prints | 5 | 6 | 6 | — | 3 | 20 | ... | 11 | 16 | 14 | 6 | 10 | 57 | |
| Rock pools | — | 4 | — | — | 1 | 5 | ... | 3 | 11 | 2 | 3 | 4 | 23 | |
| Springs | — | — | 1 | — | — | 1 | ... | — | 2 | 7 | — | 2 | 11 | |
| Seepages | 1 | 1 | — | — | — | 2 | ... | 2 | 10 | — | 1 | — | 13 | |
| Swamps | — | — | 1 | — | — | 1 | ... | 1 | 4 | — | — | — | 5 | |
| Concrete containers | — | — | — | — | — | — | ... | 2 | 7 | 3 | — | — | 12 | |
| TOTAL | 23 | 41 | 21 | 10 | 15 | 110 | ... | 110 | 212 | 97 | 86 | 88 | 593 | |

ANOPHELES BREEDING RATE.

In the 1,601 breeding places mentioned, anopheles were identified in 599 instances representing 37.4%, *Culex* in 782 or 48.9%, and *Aedes* in 220 or 13.7%.

The *A. costalis* rate in relation to total breeding places was 15.0% whilst the *A. costalis* rate in relation to total anopheles breeding places works out at 20.9%.

17. ANTI-MALARIAL MEASURES.

The six mosquito searchers were employed mostly in larvae collection in the municipal area whilst a few adult mosquito searches were made during August and early September.

For the purpose of routine searches the Municipality has been divided into 24 sections, the sections being described hereunder. Each day two or three of the sections are assigned to the searchers who make as thorough a search as possible during the morning hours.

Two searchers are detailed to a section, each searcher taking half and being in possession of a map of the section. All breeding places and potential breeding places are carefully searched and the larvae found placed in jars and brought to the laboratory for identification. The searchers return about mid-day to the laboratory where the larvae are prepared for examination.

The following day one of the searchers revisits a given section with the oiling gang in order to show the oilers where the breeding places are and checks the places oiled on the map.

From September to the end of the year 238 sections were thus searched and oiled.

| Month. | | | | Sections searched. | Sections breeding. |
|-----------|-----|-----|-----|-----------------------|-----------------------|
| September | ... | ... | 60 | ... | 52 |
| October | ... | ... | 67 | ... | 61 |
| November | ... | ... | 60 | ... | 59 |
| December | ... | ... | 51 | ... | 50 |
| TOTAL | ... | ... | 238 | ... | 222 |

SECTIONS OF MUNICIPALITY.

The following description will be sufficient to describe the area of the sections as used by the searchers.

1. Burnbrae—Thompson's Estate.
2. L.R.2, Kilimani Estate.
3. L.R.1, Upper Hill Estate.
4. Nairobi Hill.
5. Lower Nairobi Hill to Railway by Post Office.
6. South of Whitehouse Road from the Native Hospital to the railway line.
7. L.R.37/R. and L.R.987/R.
8. Railway Workshops, P.W.D. yards, Prison and the Quarries.
9. City Park.
10. Hospital Hill and Education Reserve.
11. Government House grounds and the Aboretum to Chiromo.
12. L.R.205, 475, 4875, west of Ring Road.
13. "A" south of Upper Parklands and south of Sclaters Road.
14. "B" residential area opposite the Prince of Wales School.
15. L.R.1870, Upper Parklands Estate between Sclaters and Lower Kabete Roads.
16. Westlands and Ainsworth Hill.
17. The Nairobi Swamp between River and Ngara Roads.
18. Pumwani Native Location, continuation of the Swamp.
19. Racecourse area to Mathari.
20. Asian residential area south of Forest Road.
21. Parklands.
22. Muthaiga.
23. Muthaiga, including the Muthaiga Golf Course.
24. South of Ngong Road from Forest Reserve to the Native Hospital.

Following is a table showing the relation between the ten districts mentioned under "Malaria" and the Malarial Control Sections, also the number of notified cases of malaria and the number of breeding places dealt with.

| Notification sections. | No. | Malaria Control sections. | Cases of malaria. | Breeding places dealt with. |
|------------------------|--------|---------------------------|-------------------|-----------------------------|
| Upper Parklands ... | 1 ... | 10, 12, 14 ... | 1 ... | 131 |
| Muthaiga ... | 2 ... | 21 and 22 ... | 2 ... | 97 |
| Westlands ... | 3 ... | 12, 13, 14 ... | — ... | 131 |
| Parklands ... | 4 ... | 9, 15, 20, 22 ... | 31 ... | 206 |
| Forest Road ... | 5 ... | 9, 18, 19, 22 ... | 137 ... | 259 |
| Racecourse Road ... | 6 ... | 16, 17, 18 ... | 114 ... | 366 |
| Eastleigh ... | 7 ... | 17 and 18 ... | 51 ... | 206 |
| Kilimani ... | 8 ... | 3 and 4 ... | 7 ... | 99 |
| Hill ... | 9 ... | 5, 10, 11 ... | 41 ... | 223 |
| Commercial ... | 10 ... | 16, 17, 19 ... | 562 ... | 332 |

It will be noted that Section 10, the area contiguous to the Nairobi Swamp, has the greatest number of cases and the second highest breeding rate, due to the conditions prevailing.

18. RODENT DESTRUCTION.

Routine rat trapping was carried out as in former years, the rat gang consisting of six boys working under the direction of the sanitary inspectors within the commercial area.

The Railway Administration provides its own gang which operates on railway premises and land.

The number of rats destroyed by the Municipality totalled 30,197 compared with 25,337 killed during 1936.

The Railway gang accounted for 11,085 rats, compared with 7,522 for the previous year.

The total number of rats destroyed, namely, 41,282, constitutes a record.

Twenty rats which had been found dead were sent to the laboratory for examination and twelve were found positive to *B. pestis*.

From October, a percentage of the daily rat catch was examined at our own laboratory. During the last three months of the year, 645 rats were examined and three found positive.

RATS TRAPPED.

| Month. | Municipal gang. | Railway gang. | TOTAL. |
|---------------|-----------------|---------------|--------|
| January ... | 2,430 ... | 611 ... | 3,041 |
| February ... | 2,345 ... | 617 ... | 2,962 |
| March ... | 1,531 ... | 553 ... | 2,084 |
| April ... | 3,164 ... | 652 ... | 3,816 |
| May ... | 2,137 ... | 590 ... | 2,727 |
| June ... | 2,588 ... | 717 ... | 3,305 |
| July ... | 2,748 ... | 1,696 ... | 4,444 |
| August ... | 2,626 ... | 1,157 ... | 3,783 |
| September ... | 2,702 ... | 1,121 ... | 3,823 |
| October ... | 2,819 ... | 1,046 ... | 3,865 |
| November ... | 2,437 ... | 1,427 ... | 3,864 |
| December ... | 2,670 ... | 898 ... | 3,568 |
| TOTAL ... | 30,197 ... | 11,085 ... | 41,282 |

19. NATIVE BURIALS.

The administration of the burial of pagan natives, including the cemetery is in the hands of the Public Health Department as is the control of the Public Mortuary.

The unsuitability of the soil for burial purposes of the former burial ground on the plains had been repeatedly stressed and the Council selected the site for a new burial ground just outside the Municipal border off the road to the civil aerodrome. The soil on this new site is eminently suitable being red soil on a gentle slope. The first interment took place on September 27th.

20. CREMATORIUM.

Memoranda on the subject of the advisability of erecting a modern crematorium within the Municipality have been submitted and the matter is still receiving the consideration of the Council. The site suggested is in the grounds of the City Park, whilst electricity has been suggested as the power to be used in connection with the furnace.

21. WATER SUPPLY.

During the early part of the year and again during September and December, a serious water shortage was experienced, the Kikuyu supply being about 150,000 gallons short of the normal daily requirements, but the anxious times were successfully tided over by imposing restrictions and withdrawing the minimum charge as well as by specially checking all possible sources of waste.

The quantity of water delivered from the Kikuyu supply totalled 427,843,800 gallons, equalling a daily average of 1,172,174 gallons, the average daily consumption being 1,144,550 gallons.

The estimated consumption per head per day amounted to 18.67 gallons, this low figure being mainly due to the restrictions imposed during the periods of shortage.

Frequent bacteriological examination of the water showed that the general satisfactory quality of the supply was maintained.

The pipe line of over 93,000 feet which crosses 38 rivers and swamps, in connection with the new Ruiru supply, has been laid and the new 1,000,000 gallon tank and treatment works are in course of construction.

22. HOUSING.

The question of housing both Asians and Natives in the town is becoming a serious problem. The building of the necessary accommodation is not proceeding at a rapid enough rate, with the consequence that overcrowding is rife and cannot be dealt with as energetically as could be desired.

In many instances one is faced with the necessity of taking little or no action in cases of overcrowding knowing that, if action is taken, it will simply mean the transference of the overcrowding to other places. These remarks apply in particular to contractor's camps.

Provided sufficient accommodation for natives were available many more condemnations of unsuitable dwellings could be carried out. A certain

number of houses have been demolished in the village of Pangani, the complete demolition of the village remaining in abeyance until sufficient houses are built in the new native location to the south of Pumwani. At present 175 houses are being erected, but it is to be hoped that the number of houses to be built will not cease at the number required for the accommodation of the Pangani natives.

Among the Asian community, overcrowding and general insanitary conditions are common and the above remarks apply as there is a shortage of suitable accommodation at reasonable rents, especially in regard to the poorer type of Indian.

A housing scheme for the poorer type of Indian would reduce both overcrowding and insanitary conditions considerably.

23. NEW BUILDINGS.

A further increase in the number of plans of new buildings and alterations to buildings is recorded for the year under review.

396 plans were submitted of which a considerable proportion required further scrutiny following necessary amendments.

Inspections of works in progress numbered 1939 and a total of 224 certificates of completion were issued.

The practice of occupying new buildings before they have been certified as fit for occupation appears to be decreasing, but measures will continue to be taken against offenders as a deterrent.

24. SANITATION.

CONSERVANCY.

The method of night soil collection by the single bucket system and the method of disposal by trenching remains unchanged from previous years, as was the method of transport by ox-drawn vehicles.

The daily number of buckets conserved totalled 3,385 compared with 3,138 during 1936, the increase being accounted for by the occupation of previously vacant premises and to a number of new conveniences.

New and existing premises to the extent of 53 were connected to the sewerage system with a total of 152 water closets.

Excluding septic tanks and pits, there is now a total of 1,572 water closets in use connected with the sewers.

New septic tanks have been installed in 50 instances, making a total of 533 in the Municipality.

Two conserving tanks in connection with septic tanks on land not capable of dealing with the effluent have been installed, increasing the total to thirteen.

Three septic pits were permitted where the soil was suitable.

SEWERS.

In addition to a considerable amount of surface water drainage being constructed during the year, a total of 7,140 feet of sewers in sizes varying from 2 feet by 2 feet to 9 inches were laid in the undermentioned localities:—

| | |
|------------------------------|------------|
| Campos Ribeiro Avenue | 1,490 feet |
| Jeevanjee Lane | 990 feet |
| Walji Hirji Estate | 520 feet |
| York Street | 380 feet |
| Sadler Street | 400 feet |
| Plot No. 477 | 1,100 feet |
| Government Road | 230 feet |
| Landies Road | 70 feet |
| Pumwani | 1,960 feet |

Progress was made with the construction of the main out-fall sewer, 4,180 feet of concrete egg-shaped sewer, 1' 9" by 1' 9" being laid.

REFUSE COLLECTION.

Various types of transport were in operation for the removal of refuse; there being ox-drawn carts, motor lorry, tractor with trailer, and the motor freighter.

Ox-drawn carts and the freighter were in use continuously throughout the year with the exception of those occasions when the latter was undergoing repairs, the other vehicles being put into service as the need arose.

The addition of another cell to the destructor and necessary repairs to the chimney, etc., rendered the use of the plant impossible and throughout the year, the whole of the refuse was deposited on an area of land situate to the south of Pumwani Native Location.

25. SANITARY INSPECTIONS.

Details of the work performed by the inspectorial staff of the Public Health Department will be found in the summary which follows.

For six months of the year, during the meat inspector's absence on overseas leave, the district inspectors carried out that section of the work, the time thus spent still further reducing the hours available for general district inspection.

One district inspector also spent $4\frac{1}{2}$ months on overseas leave and, as two district inspectors were obliged to attend the abattoir daily, it would be expected that essential sanitary inspections might suffer as a consequence.

Notwithstanding the extraordinary claims in connection with the abattoir and meat inspection the district work was creditably maintained.

During the year 8,267 premises were inspected for nuisances compared with 7,164 for 1936, and 1,305 defects were remedied compared with 881 remedied during the previous year.

The Bazaar Area Town Planning Scheme again took a considerable amount of time, two inspectors being employed on this work at times, in order to complete the necessary inspections and reports.

SUMMARY OF WORKS PERFORMED.

NUISANCES.

Inspections made to:—

| | |
|-------------------------------------|-------|
| Dwelling Houses | 1,762 |
| Restaurant and eating houses | 342 |
| Laundries | 57 |
| Hotels and bars | 87 |
| Offensive trades | 27 |
| Stables and cattle sheds | 62 |
| Offices and trade premises | 2,293 |
| Open spaces, streets, etc. | 694 |
| Public buildings | 82 |
| Complaints investigated | 54 |
| House to house inspections | 7 |

Defects remedied:—

| | |
|---|-----|
| Premises dirty or verminous | 75 |
| Light or ventilation insufficient | 8 |
| Dwellings without proper water supply | 7 |
| Dwellings overcrowded | 3 |
| Dwellings unfit for habitation | 48 |
| Insanitary dwellings demolished | 2 |
| Yards unpaved | 16 |
| Dilapidation | 7 |
| Rat infestation | 27 |
| Latrine accommodation defective | 127 |
| Latrine accommodation inadequate | 17 |
| Drains, closed water carriage, choked | 44 |
| Drains, closed water carriage, defective | 29 |
| Drains, open, choked | 74 |
| Drains, open, defective | 22 |
| Drains absent or inadequate | 6 |
| Septic tanks or cesspits defective | 6 |
| Septic tanks or cesspits choked | 12 |
| Waste water disposal defective or inadequate | 43 |
| Soil or waste pipes choked | 7 |
| Soil or waste pipes defective | 6 |
| Accumulations of refuse | 265 |
| Dustbins absent or defective | 128 |
| Foodstuffs unprotected against rats | 66 |
| Sleeping in kitchens or food stores | 7 |
| Mosquito breeding | 196 |
| Animals causing nuisance | 2 |
| Miscellaneous | 53 |
| Defects remedied by verbal intimation | 785 |
| Defects remedied by written intimation | 44 |
| Defects remedied by statutory notices | 474 |

SEWERAGE CONNECTIONS.

| | |
|---|-----|
| Premises connected to sewer | 53 |
| Pail closets, etc., converted into water closets | 32 |
| New closets installed to sewer | 152 |

ERECTION AND ALTERATION OF BUILDINGS.

| | | | | | | | |
|--------------------------------|-----|-----|-----|-----|-----|-----|-------|
| Plans dealt with | ... | ... | ... | ... | ... | ... | 396 |
| Inspections made | ... | ... | ... | ... | ... | ... | 1,939 |
| Completion certificates issued | ... | ... | ... | ... | ... | ... | 224 |

LICENSING OF TRADE PREMISES.

| | | | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|-----|
| Inspections made | ... | ... | ... | ... | ... | ... | 826 |
| Re-inspections made | ... | ... | ... | ... | ... | ... | 111 |

INFECTIOUS DISEASES.

| | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Cases investigated | ... | ... | ... | ... | ... | ... | 76 |
| Inspections made | ... | ... | ... | ... | ... | ... | 161 |
| Rooms disinfected | ... | ... | ... | ... | ... | .. | 139 |

RATS.

| | | | | | | | |
|------------------|-----|-----|-----|-----|-----|-----|--------|
| Number destroyed | ... | ... | ... | ... | ... | ... | 30,197 |
|------------------|-----|-----|-----|-----|-----|-----|--------|

NOTICES SERVED.

| | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|
| Public Health Ordinance | ... | ... | ... | ... | ... | ... | 113 |
| L.G. Municipal Ordinance | ... | ... | ... | ... | ... | ... | 13 |
| Municipal By-laws:— | | | | | | | |
| Cleansing Plots, By-law 499 and 465(f) | ... | ... | | | | | 49 |
| Inadequate latrine accommodation, By-law 510 | ... | | | | | | 28 |
| Refuse receptacles and removal | ... | ... | ... | | | | 25 |
| Drainage By-laws | ... | ... | ... | ... | ... | | 56 |
| Others, By-laws 509, 513, 518, 521 | ... | ... | ... | ... | ... | | 12 |
| Closing Orders (Insanitary Dwellings By-laws) | ... | ... | | | | | 8 |

26. FOOD CONTROL.

TRADE PREMISES SUBJECT TO SPECIAL CONTROL.

| | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
|-----------------------------|------|------|------|------|------|------|------|------|
| Aerated water factories ... | 5 | 4 | 4 | 5 | 4 | 5 | 5 | 5 |
| Bakeries ... | 10 | 13 | 11 | 10 | 11 | 12 | 10 | 11 |
| Butchers' shops ... | 17 | 21 | 21 | 19 | 13 | 14 | 12 | 13 |
| Dairies and milk shops ... | 20 | 28 | 26 | 32 | 24 | 22 | 21 | 20 |
| Fishmongers ... | 9 | 14 | 15 | 11 | 8 | 8 | 8 | 9 |
| Laundries and dhobies ... | 23 | 21 | 24 | 20 | 19 | 24 | 20 | 24 |
| Restaurants ... | 5 | 6 | 7 | 8 | 6 | 8 | 6 | 9 |
| Eating houses ... | 46 | 40 | 40 | 32 | 29 | 23 | 27 | 27 |
| Vegetable dealers ... | 17 | 19 | 22 | 20 | 16 | 20 | 21 | 21 |

These figures do not include stalls or shops in the Municipal Market.

They are also exclusive of premises in the native locations where there are 15 butchers' shops, eight eating houses, and five vegetable dealers.

Of the 20 dairies and milk shops, ten are cow-keepers who retail milk, comprising seven Europeans, two Native, and one Somali. The remaining 10 premises are retailing milk depots, two being European and eight Asiatic.

The examination of milk totalled 2,900 samples, of which 230 samples were found to be unfit.

From European and Indian dairies and milk shops, 2,300 samples were inspected and 140 condemned, while the samples inspected from native milk sellers numbered 600 and 90 were condemned.

INSPECTIONS TO PREMISES UNDER SPECIAL CONTROL.

| | | | | | | No. of inspections. |
|----------------------------|-----|-----|-----|-----|-----|---------------------|
| Aerated water factories | ... | ... | ... | ... | ... | 360 |
| Bakeries | ... | ... | ... | ... | ... | 84 |
| Butchers' shops | ... | ... | ... | ... | ... | 220 |
| Dairies and milk shops | ... | ... | ... | ... | ... | 604 |
| Fishmongers | ... | ... | ... | ... | ... | 84 |
| Laundries and dhobies | ... | ... | ... | ... | ... | 57 |
| Restaurants | ... | ... | ... | ... | ... | 18 |
| Eating houses | ... | ... | ... | ... | ... | 324 |
| Vegetable dealers | ... | ... | ... | ... | ... | 153 |
| Hotels and boarding houses | ... | ... | ... | ... | ... | 87 |
| Markets | ... | ... | ... | ... | ... | 259 |
| Grocers | ... | ... | ... | ... | ... | 99 |

FOOD INSPECTED AND CONDEMNED.

| | | | | | | Inspected. lbs. | Condemned. lbs. |
|---------------------|-----|-----|-----|-----|-----|--------------------|--------------------|
| Fish | ... | ... | ... | ... | ... | 15,950 | 5 |
| Fruit | ... | ... | ... | ... | ... | 8,790 | 3,393 |
| Provisions | ... | ... | ... | ... | ... | 20,483 | 160 |
| Meat | ... | ... | ... | ... | ... | 69,890 | 607 |
| Vegetables | ... | ... | ... | ... | ... | 8,890 | — |
| Bottled goods, etc. | ... | ... | ... | ... | ... | 6,214 | 4 |
| Milk | ... | ... | ... | ... | ... | 2,900 galls. | 230 galls. |

27. MILK DEPOT.

After considerable discussion on the subject of the milk supply to the town coming from unregistered sources, the Council decided to request approval of by-laws making it obligatory for all milk coming from unregistered sources and not going to licenced premises within the Municipality, to be inspected at a depot. The suggested by-laws would also make it an offence to pour milk from one container to another, except on licenced premises.

Anticipating these by-laws, the Council has formed a depot for this milk inspection at the Municipal Market, in the centre of the town.

The procedure to be adopted at this depot will be:—

1. Inspection of the milk.
2. Passing the milk through a strainer.
3. Putting the milk into sterile bottles.
4. Sealing the bottle with crown cork.
5. Sterilizing the original milk container.

The service will be counted as a health measure and no payment will be demanded.

The depot has been completely equipped and will be put into operation as soon as the necessary by-laws are approved.

28. ABATTOIR.

From the month of June, the conduct of the abattoir was placed under the jurisdiction of the Public Health Department.

The total number of animals slaughtered during the year amounted to 55,975, exceeding the figure for the previous year by 991, the increase being due to the larger number of goats and sheep dealt with.

The number of oxen slaughtered totalled 10,521, a considerable decrease on the previous year's total of 13,866.

The number of grade oxen killed was 4,048 compared with 4,422 for 1936, whilst 6,473 native oxen were slaughtered compared with 9,444 for 1936.

Fewer calves were sent to the abattoir, 395 compared with 496, whilst the percentage of condemnations increased from 15.3% to 16.7%.

There was a slight increase in the number of sheep slaughtered, the figure being 12,228 compared with 12,089.

The number of goats killed showed a large increase, the total being 30,786 compared with 26,199, an increase of 17%.

There was a small decrease in the number of pigs slaughtered, the figure being 2,045 compared with 2,334.

Tables are shown recording the number of animals slaughtered during the year together with the percentages of condemnations for the types of animals and also the causes of condemnation. Tables are also included showing the condemnation rates both for all causes and for measles for the types of oxen, over a number of years.

The number of oxen condemned for all causes amounted to 2,244 or 21.3% compared with 3,024 or 21.8% during 1936.

2,000 or 19.0% of the total oxen slaughtered were condemned on account of cysticercus bovis, compared with 2,549 and 18.3% for the previous year. Of the grade oxen 538 or 13.2% were condemned for this condition, whilst the figure for native oxen was 1,462 or 22.5%.

Of the remainder of oxen condemned, 65 were rejected on account of fevered condition, 38 for jaundice, 33 for emaciation, 48 for dropsy, 22 for redwater, 20 for bruising, 11 for septic conditions, 4 for tuberculosis, 2 for anaplasmosis, and one on account of moribund state.

No East Coast fever was registered during the year.

Of the 66 calves condemned, 64 were rejected on account of measles and two on account of redwater.

The principal cause of the rejection of the 164 sheep was lymphadenitis, totalling 103 instances. The next cause was emaciation, accounting for 19. Of other conditions jaundice caused 15 rejections, fevered condition 14, septic condition 2, dropsy 8, heartwater, bruising, and carcinoma 1 each.

The causes for the condemnation of 926 goats and native sheep were heartwater 238, fevered condition 209, dropsy 182, lymphadenitis 151, jaundice 63, emaciation 57, pleuropneumonia 12, bruising 8, and septic condition 6.

Only 24 or 1.1% of the pigs slaughtered were condemned. The causes were fevered condition 11, cysticercus cellulosae 6, tuberculosis 5, and bruising 2.

Owing to trouble arising on account of religious susceptibilities of the Indian community, two inspectors are employed for the examination of meat so that the same inspector does not examine both the Mohammedan and Hindu carcasses.

The estimated total weight of meat condemned amounted to 983,721 lbs., a considerable decrease compared with the total of 1,294,962 lbs. condemned during 1936.

INSPECTIONS.

| 1937. | | | Inspected. | Condemned. | Percentage of carcasses condemned. |
|------------|-----|-----|------------|------------|--|
| Oxen—grade | ... | ... | 4,048 | 645 | 15.93 |
| native | ... | ... | 6,473 | 1,599 | 24.70 |
| | | | — 10,521 | — 2,244 | — 21.32 |
| Calves | ... | ... | 395 | 66 | 16.70 |
| Sheep | ... | ... | 12,228 | 164 | 1.34 |
| Goats | ... | ... | 30,786 | 926 | 3.00 |
| Pigs | ... | ... | 2,045 | 24 | 1.17 |
| TOTAL | | | 55,975 | 3,424 | 6.11 |

ORGANS CONDEMNED APART FROM CARCASSES.

| | | | |
|------------|-----|-----|--------|
| Hearts | ... | ... | 4,656 |
| Heads | ... | ... | 3,761 |
| Tongues | ... | ... | 3,761 |
| Kidneys | ... | ... | 7,615 |
| Livers | ... | ... | 20,494 |
| Lungs | ... | ... | 25,319 |
| Spleens | ... | ... | 5,712 |
| Stomachs | ... | ... | 4,360 |
| Intestines | ... | ... | 3,821 |
| Others | ... | ... | 151 |
| TOTAL | | | 79,650 |

ESTIMATED TOTAL WEIGHT OF MEAT CONDEMNED.

| | | |
|--------|-----|--------------|
| Beef | ... | 886,912 lbs. |
| Veal | ... | 7,322 lbs. |
| Mutton | ... | 20,673 lbs. |
| Goat | ... | 58,578 lbs. |
| Pork | ... | 10,236 lbs. |
| TOTAL | | 983,721 lbs. |

CONDITIONS NECESSITATING CONDEMNATIONS.

| | | | | Oxen. | | Calves. | Sheep. | Goats. | Pigs. | TOTAL. |
|------------------------|-----|-----|-----|--------|---------|---------|--------|--------|-------|--------|
| | | | | Grade. | Native. | | | | | |
| Anaplasmosis | ... | ... | ... | 1 | 1 | — | — | — | — | 2 |
| Bruising | ... | ... | ... | 12 | 8 | — | 1 | 8 | 2 | 31 |
| Carcinoma | ... | ... | ... | — | — | — | 1 | — | — | 1 |
| Cysticercus bovis | ... | ... | ... | 538 | 1462 | 64 | — | — | — | 2064 |
| Cysticercus cellulosae | ... | ... | ... | — | — | — | — | — | 6 | 6 |
| Dropsy | ... | ... | ... | 11 | 37 | — | 8 | 182 | — | 238 |
| Emaciation | ... | ... | ... | 25 | 8 | — | 19 | 57 | — | 109 |
| Fevered condition | ... | ... | ... | 26 | 39 | — | 14 | 209 | 11 | 299 |
| Heartwater | ... | ... | ... | — | — | — | 1 | 238 | — | 239 |
| Jaundice | ... | ... | ... | 22 | 16 | — | 15 | 63 | — | 116 |
| Lymphadenitis | ... | ... | ... | — | — | — | 103 | 151 | — | 254 |
| Moribund | ... | ... | ... | — | 1 | — | — | — | — | 1 |
| Pleuro-pneumonia | ... | ... | ... | — | — | — | — | 12 | — | 12 |
| Redwater | ... | ... | ... | 3 | 19 | 2 | — | — | — | 24 |
| Septic condition | ... | ... | ... | 7 | 4 | — | 2 | 6 | — | 19 |
| Tuberculosis | ... | ... | ... | — | 4 | — | — | — | 5 | 9 |
| TOTAL | ... | ... | ... | 645 | 1599 | 66 | 164 | 926 | 24 | 3424 |

OXEN SLAUGHTERED AND CONDEMNED FOR ALL CAUSES.

| Year. | —Grade— | | | | —Native— | | | | —Total— | | | |
|-------|----------------|--------------|------------|------|----------------|--------------|------------|------|----------------|--------------|------------|------|
| | No. killed. | No. cond. | % cond. | | No. killed. | No. cond. | % cond. | | No. killed. | No. cond. | % cond. | |
| 1927 | ... | 5,634 | 232 | 4.1 | ... | 5,178 | 335 | 6.4 | ... | 10,812 | 567 | 5.2 |
| 1928 | ... | 4,907 | 290 | 5.9 | ... | 6,827 | 480 | 7.0 | ... | 11,734 | 770 | 6.5 |
| 1929 | ... | 4,151 | 252 | 6.0 | ... | 7,617 | 762 | 10.0 | ... | 11,768 | 1,014 | 8.6 |
| 1930 | ... | 4,214 | 313 | 7.4 | ... | 7,243 | 738 | 10.1 | ... | 11,457 | 1,051 | 9.1 |
| 1931 | ... | 4,306 | 471 | 10.9 | ... | 9,375 | 1,318 | 14.0 | ... | 13,681 | 1,789 | 13.0 |
| 1932 | ... | 3,054 | 363 | 11.8 | ... | 11,044 | 1,757 | 15.9 | ... | 14,098 | 2,120 | 15.0 |
| 1933 | ... | 2,924 | 399 | 13.6 | ... | 12,968 | 2,625 | 20.2 | ... | 15,892 | 3,024 | 19.3 |
| 1934 | ... | 4,531 | 664 | 14.6 | ... | 10,264 | 2,230 | 21.7 | ... | 14,795 | 2,894 | 19.5 |
| 1935 | ... | 4,806 | 682 | 14.1 | ... | 9,007 | 2,066 | 22.9 | ... | 13,813 | 2,748 | 19.8 |
| 1936 | ... | 4,422 | 657 | 14.8 | ... | 9,444 | 2,367 | 25.0 | ... | 13,866 | 3,024 | 21.8 |
| 1937 | ... | 4,048 | 645 | 15.9 | ... | 6,473 | 1,599 | 24.7 | ... | 10,521 | 2,244 | 21.3 |

OXEN SLAUGHTERED AND CONDEMNED FOR "MEASLES."

| Year. | —Grade— | | | | —Native— | | | | —Total— | | | |
|-------|----------------|--------------|------------|------|----------------|--------------|------------|------|----------------|--------------|------------|------|
| | No. killed. | No. cond. | % cond. | | No. killed. | No. cond. | % cond. | | No. killed. | No. cond. | % cond. | |
| 1927 | ... | 5,634 | — | — | ... | 5,178 | — | — | ... | 10,812 | 490 | 4.5 |
| 1928 | ... | 4,907 | — | — | ... | 6,827 | — | — | ... | 11,734 | 740 | 6.3 |
| 1929 | ... | 4,151 | — | — | ... | 7,617 | — | — | ... | 11,768 | 975 | 8.2 |
| 1930 | ... | 4,214 | 277 | 6.5 | ... | 7,243 | 683 | 9.4 | ... | 11,457 | 960 | 8.3 |
| 1931 | ... | 4,306 | 388 | 9.0 | ... | 9,375 | 1,227 | 13.0 | ... | 13,681 | 1,615 | 11.8 |
| 1932 | ... | 3,054 | 321 | 10.5 | ... | 11,044 | 1,568 | 14.1 | ... | 14,098 | 1,889 | 13.3 |
| 1933 | ... | 2,924 | 326 | 11.1 | ... | 12,968 | 2,158 | 16.6 | ... | 15,892 | 2,484 | 15.6 |
| 1934 | ... | 4,531 | 600 | 13.2 | ... | 10,264 | 1,820 | 17.7 | ... | 14,795 | 2,420 | 16.3 |
| 1935 | ... | 4,806 | 495 | 10.2 | ... | 9,007 | 1,894 | 21.0 | ... | 13,813 | 2,389 | 17.2 |
| 1936 | ... | 4,422 | 417 | 9.4 | ... | 9,444 | 2,132 | 22.5 | ... | 13,866 | 2,549 | 18.3 |
| 1937 | ... | 4,048 | 538 | 13.2 | ... | 6,473 | 1,462 | 22.5 | ... | 10,521 | 2,000 | 19.0 |

29. REPORT ON CHILD WELFARE, ANTE-NATAL, AND VENEREAL CLINICS, DISPENSARIES, AND HOME VISITS.

By

EDITH N. HARTLEY, M.B., Ch.B.(Edin.), D.P.H.(Edin.),

Medical Officer in Charge.

Dr. Evelyn F. Hartley resigned in October, 1936, and transferred to the Government Medical Service at the end of January, 1937. Dr. Edith N. Hartley, on appointment, commenced her duties from February 1st, 1937.

During the year four Welfare Centres have been maintained by the Municipal Council: three for Africans, namely Pumwani, Kariakor, and Railway Landies, and one for Indians in grounds of the Indian Maternity Home, under the care of three European and one Indian Health Visitor, respectively.

The visiting of the mothers in their homes by the Health Visitors and their personal influence and interest in the mothers and their children is one of the most important ways of gaining their confidence and in persuading them to attend the Centres for further advice and it is by this means that they are able gradually to inculcate a knowledge of hygiene and better diet and cleanliness.

It is interesting to note that each Centre has its own predominant type of mothers and children—Pumwani and Kariakor, Swahili; Railway Landies, Jalu; while Kikuyus come to each but are not permanent residents.

PUMWANI CENTRE.

Mrs. Dugmore was Health Visitor to this Centre, continuing her very excellent work of the preceding year, until her resignation at the end of August. Miss Smith of the Kariakor Centre did the work, as well as her own, until it was possible to transfer Mrs. Gibb from the Indian Welfare Centre on September 1st.

Child Welfare Clinics and Venereal Disease Clinics were held regularly and dispensary work was done, principally among the women and children attending the clinics. Many of these attend daily.

| | Clinics held. | Total attendances. |
|---------------------------------|---------------|--------------------|
| Child welfare | 47 | 9,692 |
| Venereal disease | 52 | 3,988 |
| Dispensary | | 5,935 |
| Home visits: Health Visitor ... | | 1,053 |
| Native staff ... | | 3,899 |

The Health Visitor has one ayah and two male dressers to assist her.

During the outbreak of plague in the location 1,415 women and children received injections at the Centre. There was only one death of a woman attending this centre; she had received her first but not her second injection. One child who had plague recovered.

Since taking over charge of this Centre, Mrs. Gibb has commenced a sewing class to teach the mothers how to make simple garments for their children and to knit. The mothers are eager to learn but are profoundly

ignorant in such matters. While giving the lessons the Health Visitor has an opportunity of talking to them on such matters as child management and care.

The predominant illnesses at this Centre are pneumonia and broncho-pneumonia among the children.

The women attending this Centre are of very mixed tribes, but the majority are Swahili. Some Kikuyu women attend but the greater number of these are "casuals" who come to the location for a few weeks and then return to the reserve.

KARIAKOR CLINIC.

This Centre has continued to be in the charge of Miss J. Smith as Health Visitor. At the beginning of the year the work was being carried on in a large but unsuitable building in the middle of the Municipal Native Housing, but on March 8th the work was transferred to the new Kariakor Welfare Centre opposite the Racecourse. As this building was specially designed for this work, it is approaching to the ideal.

Child Welfare clinics and venereal disease clinics are held regularly and dispensary work is done among the mothers and children attending the clinics, many of whom attend daily.

| | | | | Clinics held. | Total attendances. |
|-----------------------------|-----|-----|-----|---------------|--------------------|
| Child welfare | ... | ... | ... | 52 | 9,060 |
| Venereal diseases | ... | ... | ... | 51 | 2,294 |
| Dispensary | ... | ... | ... | ... | 4,737 |
| Home visits: Health Visitor | ... | ... | ... | ... | 1,517 |
| Ayachs | ... | ... | ... | ... | 2,435 |

The Health Visitor has two ayachs to assist her. During the outbreak of plague, 2,030 women and children were inoculated at this Centre.

The predominant illnesses among the children attending this Centre are pneumonia and broncho-pneumonia.

Since early in the year Miss Smith has had a sewing and knitting class for the mothers. She acts on the principle that only such materials are used which are within the means of the mothers themselves, procurable in the shops they frequent. She teaches them to make the most of such articles and how to use them to the greatest advantage.

Soon she hopes to put these same principles into demonstrations on diet and cooking.

The women attending this Centre are of very mixed tribes, but the majority are Swahili, as this Centre serves Pangani also. The Kikuyu women who attend are "casuals" who come to Nairobi for a few weeks and then return to their shambas. In consequence they are more unsophisticated and dirtier than the resident women. Their houses are not kept as clean and they do not remain long enough to enable the Health Visitor to teach and persuade them to change their habits.

ANTE-NATAL CLINICS AT PUMWANI HOSPITAL.

The ante-natal clinics which ordinarily would be held at the two above-mentioned Centres, are being held regularly at the Lady Grigg African Maternity Hospital.

The reason is that it accustoms the women to come to the hospital and, if necessity arises, that they should be admitted. They are willing to become

in-patients, having lost any fear of the establishment and staff. Also these demonstrations in ante-natal supervision form a valuable part of the training of the girls under instruction at the hospital.

| Clinics held. | Total attendances. |
|---------------|--------------------|
| 52 | ... 1,681 |

RAILWAY LANDIES CENTRE.

This Centre has continued to be under the charge of Miss Pearson as Health Visitor.

Child Welfare clinics, ante-natal clinics and venereal diseases clinics are held regularly and dispensary work is done among the women and children attending the clinics; many attend daily.

| | Clinics held. | Total attendances. |
|---------------------------------|---------------|--------------------|
| Child welfare | 52 | 11,799 |
| Venereal diseases | 52 | 2,081 |
| Ante-natal | 52 | 1,664 |
| Dispensary | | 10,446 |
| Home visits: Health Visitor ... | | 1,355 |
| Ayahs | | 3,348 |

The Health Visitor has two ayahs to assist her and a boy is lent from the Railway, by courtesy of the General Manager, K.U.R. & H., to help to clean and assist at the Centre.

During the outbreak of plague the Welfare Centre was used as an inoculating station, where men, women, and children were inoculated.

| | |
|-----------------|-------|
| Asiatics | 287 |
| Natives | 5,299 |
| Total | 5,586 |

No cases of plague occurred among the women or children. Occasional cases of cerebrospinal meningitis occur in the Landies. One was reported on the 30/7/37 in a child of 4 years who later died in hospital.

The predominant illnesses are pneumonia, broncho-pneumonia, and diarrhoea during the warm season and malaria—the patients being infected while at Kisumu.

The vast majority of the women are Jaluo and it is an exception to find Kikuyu women at this Centre. The women of the Landies are never very permanent as they receive yearly two Railway passes and they return with their children to their shambas which frequently are in unhealthy districts. When they return to the Landies they are found to be suffering from malaria and yaws, and their babies, who went away fat and healthy, come back sick and ailing. In consequence the work in the Landies does not show the same satisfactory results (it is more “uphill”) as at the other centres with their permanent residents.

New lines of houses have been erected in this location this year and the population has increased and shows every likelihood of increasing still further. Owing to the greater number of clinics held at this centre and the much larger number of attendances, the Health Visitor, in consequence, has more homes requiring to be visited; consequently she is unable to undertake sewing classes for the mothers.

INDIAN WELFARE CENTRE.

Mrs. Gibb continued to be in charge as Health Visitor until September, when she was transferred to the Pumwani Centre, handing over charge to Miss P. Benjamin, who came from the Lady Reading Health School, Delhi.

As the Indian community is very large and resident over an extensive area, it is impossible for the Health Visitor to cover all districts and get into touch with many of the mothers. In consequence it is the mothers resident comparatively near the Centre who attend and who can be visited. It is gratifying to see that many Goanese women are availing themselves of the advantages of the Centre.

The Health Visitor has a nurse, trained at the Indian Maternity Hospital, to assist her.

Child Welfare clinics and ante-natal clinics are held regularly and dispensary work is done among the women and children who attend the clinics.

| | Clinics held. | | | Total attendances. | |
|---------------------------------|---------------|-----|-----|--------------------|--|
| Child welfare | 55 | ... | ... | 6,273 | |
| Ante-natal | 52 | ... | ... | 1,649 | |
| Dispensary | | ... | ... | 5,455 | |
| Home visits: Health Visitor ... | | ... | ... | 1,454 | |
| Nurse | | ... | ... | 713 | |

Venereal diseases clinics are not held. Any patients who require treatment are directed to consult their own doctor. In this way there is no interference with the practice of the doctors.

The Health Visitor is inaugurating classes for the mothers and will commence on home nursing, child care, and diet.

CHILD WELFARE CLINICS.

| | Pumwani. | | Kariakor. | | Railway landies. | | Indian. | | Total. |
|---------------------|----------|-----|-----------|-----|------------------|-----|---------|-----|--------|
| Clinics held | 47 | ... | 52 | ... | 52 | ... | 55 | ... | 206 |
| Attendances | 9,692 | ... | 9,060 | ... | 11,799 | ... | 6,273 | ... | 36,824 |

ANTE-NATAL CLINICS.

| | African Maternity Hospital. | | Railway landies. | | Indian. | | Total. |
|---------------------|-----------------------------|-----|------------------|-----|---------|-----|--------|
| Clinics held | 52 | ... | 52 | ... | 52 | ... | 156 |
| Attendances | 1,681 | ... | 1,664 | ... | 1,649 | ... | 4,994 |

DISPENSARIES.

| | Pumwani. | | Kariakor. | | Railway landies. | | Indian. | | Total. |
|-----------------|----------|-----|-----------|-----|------------------|-----|---------|-----|--------|
| Women | 2,291 | ... | 1,402 | ... | 2,060 | ... | 1,059 | ... | 6,812 |
| Children | 3,569 | ... | 3,235 | ... | 8,386 | ... | 4,496 | ... | 19,686 |
| Men | 75 | ... | 31 | ... | — | ... | — | ... | 106 |
| Total | 5,935 | ... | 4,668 | ... | 10,446 | ... | 5,555 | ... | 26,604 |

VENEREAL DISEASES CLINICS.

| | Pumwani. | | Kariakor. | | Railway landies. | | Total. |
|------------------|----------|-----|-----------|-----|------------------|-----|--------|
| Clinics held ... | 52 | ... | 51 | ... | 52 | ... | 155 |
| Attendances ... | 3,988 | ... | 2,294 | ... | 2,081 | ... | 8,363 |

The following table shows the distribution of syphilis and yaws. Syphilis is found mostly among the resident women, while yaws is overwhelmingly a disease of the "casual" cases. The Health Visitor of Railway Landies Centre maintains that the patients arrive from the Kisumu area already infected.

The great difficulty in treating the syphilitic cases is in making the patients understand the importance of continuing the treatment. As soon as clinical evidence of the disease has disappeared they conclude no further treatment is necessary.

VENEREAL DISEASES CLINICS.

SYPHILIS.

| | WOMEN. | | CHILDREN. | | Total. | Cured. | Completed of one course of treatment. | Still attending. | Gone away without completing course. |
|------------------------|-----------|---------|-----------|---------|--------|--------|---------------------------------------|------------------|--------------------------------------|
| | Resident. | Casual. | Resident. | Casual. | | | | | |
| Pumwani Centre ... | 170 | — | — | — | 170 | 33 | 98 | 39 | — |
| Kariakor Centre ... | 100 | 74 | — | — | 174 | 18 | 24 | 101 | 31 |
| Railway landies centre | 53 | 103 | 15 | 13 | 184 | — | 124 | 13 | 60 |

YAWS.

| | WOMEN. | | CHILDREN. | | Total. | Cured. | still attending. | Gone away before being cured. |
|---------------------|-----------|---------|-----------|---------|--------|--------|------------------|-------------------------------|
| | Resident. | Casual. | Resident. | Casual. | | | | |
| Pumwani Centre | — | 257 | — | 116 | 373 | 203 | 62 | 108 |
| Kariakor Centre | 40 | 42 | 11 | 48 | 141 | 22 | 100 | 19 |
| Rly. landies centre | — | 33 | 70 | 120 | 223 | 126 | 20 | 87 |

HOME VISITS BY HEALTH VISITORS AND NATIVE STAFF.

| | Pumwani. | | Kariakor. | | Railway landies. | | Indian. | | Total. |
|--------------------|----------|-----|-----------|-----|------------------|-----|---------|-----|--------|
| Health Visitor ... | 1,053 | ... | 1,517 | ... | 1,355 | ... | 1,454 | ... | 5,379 |
| Staff ... | 3,899 | ... | 2,475 | ... | 3,348 | ... | 711 | ... | 10,433 |
| TOTAL ... | 4,952 | ... | 3,992 | ... | 4,703 | ... | 2,165 | ... | 15,812 |

COMPARISON OF ATTENDANCES AND VISITS.

| | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
|------------------------------|--------|--------|--------|--------|--------|--------|
| Child Welfare clinics ... | 7,923 | 11,448 | 11,698 | 11,385 | 25,190 | 36,824 |
| Venereal Disease clinics ... | 4,219 | 3,432 | 3,967 | 6,277 | 8,703 | 8,363 |
| Dispensaries ... | 23,316 | 19,861 | 29,066 | 36,258 | 38,058 | 26,604 |
| Ante-natal clinics ... | 1,626 | 1,958 | 2,198 | 2,711 | 3,955 | 15,812 |
| Total attendances ... | 37,084 | 36,699 | 46,929 | 56,631 | 75,906 | 87,603 |
| Home visits ... | 3,646 | 4,373 | 7,738 | 12,146 | 12,532 | 15,812 |

30. STAFF.

The details of the staff employed by the Public Health Department during the year are given hereunder.

MEDICAL OFFICER OF HEALTH.

Dr. H. W. Tilling continued to carry out the duties throughout the year.

LADY MEDICAL OFFICER.

Dr. E. N. Hartley was appointed on 1st February in place of Dr. E. F. Hartley who resigned to take up a Government post.

CHIEF SANITARY INSPECTOR.

This post is still vacant, not having been filled since 1931. The duties have been carried out by Mr. R. C. Forster, in addition to his district work.

As pointed out in previous annual reports, the non-filling of this post is acting detrimentally to the efficiency of the department.

SANITARY INSPECTORS.

Mr. R. C. Forster, Mr. D. Mackintosh, and Mr. P. Cairns carried out their duties throughout the year. Mr. S. W. White was absent for four months on overseas leave.

MEAT AND FOOD INSPECTOR.

Mr. A. A. Watts was absent for six months of the year on overseas leave.

ANTI-MALARIA OFFICER.

Mr. G. R. C. van Someren was appointed on 1st February and carried out the duties during the year.

HEALTH VISITORS.

Mrs. E. Dugmore resigned on 31st August and Mrs. A. G. Gibb, who had been acting temporarily at the Indian Clinic, was posted to Pumwani Clinic in her place.

Miss B. B. Pearson continued her work throughout the year at the Railway Landies Clinic and Miss J. Smith continued her work at Kariakor Clinic.

Miss P. Benjamin came from India on first appointment and was posted to the Indian Clinic on 1st September.

CLERK.

The duties were performed by Miss W. W. Harris throughout the year.

NATIVE STAFF.

The office staff consists of one head boy who is also a notice server and two messengers. One Goan female assistant is employed at the Indian Clinic, the other clinics having a total of one male and five female dressers.

The number of boys employed on outside work comprise one motor driver, six rat boys, six oiling boys, six searchers, and one boy to assist in food inspection.

A gang of twenty boys, on the pay roll of the engineering department, is employed on anti-malarial work.

Administrative control is exercised over the staff of the Abattoir, namely, one superintendent, one clerk, one Mohammedan killer, and 41 native staff.

Control is also exercised over the two Indians employed in connection with the dead cart and public mortuary as well as the native staff at the Native cemetery.

Personnel of Public Health Department during 1937.

| <i>Appointed.</i> | | <i>From</i> | <i>To</i> |
|------------------------------|---------------------------------|-------------|-----------|
| MEDICAL OFFICER OF HEALTH. | | | |
| 5/5/30 | Dr. H. W. Tilling | 1/1/37 | 31/12/37 |
| LADY MEDICAL OFFICER. | | | |
| 23/5/35 | Dr. E. F. Hartley | 1/1/37 | 31/ 1/37 |
| 1/2/37 | Dr. E. N. Hartley | 1/2/37 | 31/12/37 |
| CHIEF SANITARY INSPECTOR. | | | |
| Vacancy. | | | |
| SANITARY INSPECTORS. | | | |
| 6/8/29 | Mr. R. C. Forster | 1/1/37 | 31/12/37 |
| 15/9/31 | Mr. D. Mackintosh | 1/1/37 | 31/12/37 |
| 26/8/33 | Mr. S. W. White | 1/1/37 | 31/12/37 |
| 1/1/36 | Mr. P. Cairns | 1/1/37 | 31/12/37 |
| INSPECTOR OF MEAT AND FOODS. | | | |
| 1/1/29 | Mr. A. A. Watts | 1/1/37 | 31/12/37 |
| ANTI-MALARIA OFFICER. | | | |
| 1/2/37 | Mr. G. R. C. van Someren | 1/2/37 | 31/12/37 |
| SANITARY OVERSEER. | | | |
| 1/6/29 | Mr. T. Bagnall | 1/1/37 | 31/12/37 |
| HEALTH VISITORS. | | | |
| 1/10/35 | Mrs. E. Dugmore | 1/1/37 | 31/ 8/37 |
| 1/1/36 | Miss B. B. Pearson | 1/1/37 | 31/12/37 |
| 1/1/36 | Miss J. Smith | 1/1/37 | 31/12/37 |
| 4/6/36 | Mrs. A. Gibb | 1/1/37 | 31/12/37 |
| 1/9/37 | Miss P. Benjamin | 1/9/37 | 31/12/37 |
| CLERK. | | | |
| 1/7/35 | Miss W. W. Harris | 1/1/37 | 31/12/37 |
| NATIVE STAFF. | | | |
| | Motor Driver | 1 | |
| | Head Boy | 1 | |
| | Messengers | 2 | |
| | Dressers | 7 | |
| | Rat Boys | 6 | |
| | Oiling Boys | 6 | |
| | Searchers | 6 | |
| | Food inspection | 1 | |
| | Anti-malarial gang | 20 | |

31. EXPENDITURE.

The expenditure of the Public Health Department for the year 1937 amounted to £10,475 of which the Government by grants made on account of public health, contributed £5,237, leaving an equal amount to be borne by the Council.

Details of the expenditure by the Public Health Department during the year are given hereunder. The figures in brackets refer to expenditure during 1936.

EXPENDITURE.

| ADMINISTRATION. | | | | | | £ | £ | £ | £ |
|--|-----|-----|-----|-----|-----|-------|---------|--------|---------|
| Salaries: M.O.H. and Sanitary Inspectors | ... | ... | ... | ... | ... | 4,076 | (3,936) | | |
| Clerk | ... | ... | ... | ... | ... | 220 | (190) | | |
| Boys' wages, etc. | ... | ... | ... | ... | ... | 81 | (74) | | |
| Locomotion allowance | ... | ... | ... | ... | ... | 157 | (145) | | |
| Passages | ... | ... | ... | ... | ... | 323 | (106) | | |
| Provident Fund | ... | ... | ... | ... | ... | 453 | (421) | | |
| Rent | ... | ... | ... | ... | ... | 300 | (300) | | |
| Printing, stationery, and telephone | ... | ... | ... | ... | ... | 120 | (113) | | |
| Sundry expenses | ... | ... | ... | ... | ... | 43 | (21) | | |
| | | | | | | <hr/> | | 5,773 | (5,306) |
| INFECTIOUS DISEASES PREVENTION. | | | | | | | | | |
| Hospital fees | ... | ... | ... | ... | ... | 400 | (497) | | |
| Notification fees | ... | ... | ... | ... | ... | 89 | (114) | | |
| Overseer's salary | ... | ... | ... | ... | ... | 350 | (350) | | |
| Native wages, etc. | ... | ... | ... | ... | ... | 219 | (233) | | |
| Oil and stores | ... | ... | ... | ... | ... | 372 | (364) | | |
| Upkeep of lorry | ... | ... | ... | ... | ... | 85 | (83) | | |
| | | | | | | <hr/> | | 1,515 | (1,641) |
| MALARIA CONTROL. | | | | | | | | | |
| Malaria Officer, salary | ... | ... | ... | ... | ... | 330 | | | |
| Native wages, etc. | ... | ... | ... | ... | ... | 66 | | | |
| Laboratory expenses | ... | ... | ... | ... | ... | 19 | | | |
| | | | | | | <hr/> | | 415 | |
| FOOD INSPECTION. | | | | | | | | | |
| Miscellaneous expenses | ... | ... | ... | ... | ... | 96 | (15) | | |
| | | | | | | <hr/> | | 96 | (15) |
| AUXILIARY HEALTH SERVICES. | | | | | | | | | |
| Salaries: L.M.O. | ... | ... | ... | ... | ... | 602 | (602) | | |
| Health Visitors | ... | ... | ... | ... | ... | 1,313 | (1,077) | | |
| Medical Stores | ... | ... | ... | ... | ... | 344 | (266) | | |
| Infant food | ... | ... | ... | ... | ... | 79 | (73) | | |
| Native Dressers and Ayahs | ... | ... | ... | ... | ... | 186 | (153) | | |
| Maintenance of clinics | ... | ... | ... | ... | ... | 71 | (61) | | |
| Stationery, telephone, and sundries | ... | ... | ... | ... | ... | 33 | (25) | | |
| Furniture for clinics | ... | ... | ... | ... | ... | 48 | | | |
| | | | | | | <hr/> | | 2,676 | (2,257) |
| | | | | | | <hr/> | | | |
| Total | ... | ... | ... | ... | ... | | | 10,475 | (9,219) |
| Less Government contribution | ... | ... | ... | ... | ... | | | 5,237 | |
| | | | | | | <hr/> | | | |
| Amount contributed by Council | ... | ... | ... | ... | ... | | | £5,238 | |
| | | | | | | <hr/> | | | |

Comparison of the expenditure with previous years is made in the table following:—

| Year. | Expenditure. | Paid by Government. | Paid by Council. |
|-------|--------------|------------------------|---------------------|
| 1929 | ... 7,948 | ... 6,955 | ... 993 |
| 1930 | ... 6,993 | ... 6,118 | ... 875 |
| 1931 | ... 5,978 | ... 3,736 | ... 2,242 |
| 1932 | ... 5,967 | ... 2,983 | ... 2,984 |
| 1933 | ... 6,144 | ... 3,072 | ... 3,072 |
| 1934 | ... 6,547 | ... 3,273 | ... 3,274 |
| 1935 | ... 7,230 | ... 3,703 | ... 3,527 |
| 1936 | ... 9,219 | ... 4,511 | ... 4,708 |
| 1937 | ... 10,475 | ... 5,237 | ... 5,238 |

It will be noted that the expenditure was greater by £1,256 than the previous year, all the headings showing increases with the exception of "Infectious disease prevention," which decreased by £126, mainly due to reduction in the hospital and notification fees.

The increased amount for "Administration" is accounted for chiefly by the amount paid for passages.

The amount of £415 expended under "Malaria control" is a new item and includes salary and wages of laboratory staff and laboratory expenses.

The difference of £419 under the heading of "Auxiliary Services" is accounted for by an increase in the staff of Health Visitors and also by a greater consumption of medical stores due to the increase in the number of patients dealt with.

